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THE BRITISH PTERIDOLOGICAL SOCIETY

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Edited by A.M. Paul

THE BRITISH PTERIDOLOGICAL SOCIETY
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The BRITISH PTERIDOLOGICAL SOCIETY was founded in 1891 and today continues as a focus for fern enthusiasts. It provides a wide range of information about ferns through the medium of its publications and other literature. It also organises formal talks, informal discussions, field meetings, garden visits, plant exchanges, a spore exchange scheme and fern book sales. The Society has a wide membership which includes gardeners, nurserymen and botanists, both amateur and professional. The Society's journals, the *Fern Gazette*, *Pteridologist* and *Bulletin*, are published annually. The *Fern Gazette* publishes matter chiefly of specialist interest on international pteridology, the *Pteridologist*, topics of more general appeal, and the *Bulletin*, Society business and meetings reports.

Membership is open to all interested in ferns and fern-allies. **SUBSCRIPTION RATES** (due on 1st January each year) are Full Personal Members £15, Personal Members not receiving the *Fern Gazette* £12, Student Members £9, Subscribing Institutions £25. Family membership in any category is an additional £2. Applications for membership should be sent to the Membership Secretary (address above) from whom further details can be obtained. (Remittances made in currencies other than Sterling are £5 extra to cover bank conversion charges.) **Airmail** postage for all journals is an extra £4, or for those not receiving the *Fern Gazette* £2.50. **Standing Order** forms are available from the Membership Secretary.

(**Front cover**: *Asplenium trichomanes* subsp. *pachyrachis* (Christ) Lovis & Reichstein from castle walls, Monmouthshire.)

Back numbers of the *Fern Gazette*, *Pteridologist* and *Bulletin* are available for purchase from
P.J. Acock, 13 Star Lane, St Mary Cray, Kent BR5 3LJ, from whom further details can be obtained.

THE

BULLETIN

OF THE

BRITISH PTERIDOLOGICAL SOCIETY

Vol. 5 1996 No. 1

NATIONAL FIELD MEETINGS 1996

NORTH YORKSHIRE – 21-23 June

R.J. Murphy

Friday evening saw a group of ten of us meeting at Horton-in-Ribblesdale for a preliminary discussion about the weekend ahead and the programme planned for us by the leader, Jack Bouckley.

Saturday 22nd June, was to be spent visiting three limestone pavements in the area, all of them SSSIs and two of them National Nature Reserves. The weather was cool, but dry, a great blessing when faced with deep grykes and limestone blocks that could be loose and certainly slippery in rain. A preliminary search around an old lime-kiln yielded *Asplenium trichomanes* subsp. *quadrivalens* and *Cystopteris fragilis*. Scar Close, 34/751777, was the first pavement to be explored. Considered to be a 'jewel in the crown' of the National Trust, it demonstrates a unique combination of acidic and calcicolous species. Islands of peat cover parts of the pavement and these support such plants as ling, *Calluna vulgaris*, and rowan, *Sorbus aucuparia*. It was the right time of year to see the flush of new fronds from numbers of common polypody, *Polypodium vulgare*, growing at the edge of the peaty banks where they met the limestone. Calcicolous species grew in the hollows and grykes. As well as 14 species of fern, including *Polypodium interjectum*, we saw lily-of-the-valley, *Convallaria majalis*, in flower, young ash, *Fraxinus excelsior*, rooted deep into the grykes and one delightful colony of bird's-eye primrose, *Primula farinosa*.

Dryopteris filix-mas was frequent, growing in both narrow and wider grykes, often under the shelter of ash, but *D. dilatata* grew only in the narrower ones, its fronds often just reaching up to the limestone surface. Members of the *D. affinis* group were few. They grew so deep within the grykes that it took much effort on the part of one member, Paul Ripley, to reach down far enough to allow us to confirm the identification. *Cystopteris fragilis* was abundant, as were *Asplenium ruta-muraria, A. scolopendrium* and *A. trichomanes* subsp. *quadrivalens*. More widespread searches revealed a few plants of *A. trichomanes-ramosum (A. viride). Pteridium aquilinum* was present as were both green and red-stemmed varieties of *Athyrium filix-femina* and some *Polystichum setiferum*. But it was the hard shield fern, *P. aculeatum*, that attracted most attention, growing in just about every gryke, the young fronds soft and light-green in colour, surrounded by old, dark, persistent ones that were quite harsh to the touch.

One change marked this meeting. Jack had hoped to arrange the usual pub lunch, but it was not to be and it was the first occasion when difficulties, not of his making, made this impossible. However, the weather was beautiful and we had a picnic lunch on the limestone pavement, surrounded by ferns and accompanied by much fern discourse.

Colt Park Wood, 34/775774, was the next site to be visited. This pavement is tree-covered, ash being dominant, and the grykes are deep and overgrown by brambles and vicious nettles. It is regarded as very dangerous and much care was required by those surveying it. Even then one member of the group slipped down twice and a dead sheep was seen at the bottom of one gryke. The ferns, however, were good and eleven species were listed. On a stony bank at the side of the track opposite the wood there was one special find, (at 34/773774), 15 plants of *Botrychium lunaria*, 14 in spore!, as well as *Asplenium trichomanes-ramosum*.

South House Pavement, 34/775740, was the final visit. Eleven different ferns were recorded here, two of them being the first for the day: one plant of *Dryopteris submontana* and several of *Gymnocarpium robertianum*.

Sunday took us into a very different environment, the woods around Ingleton Falls, ascending the River Twiss as far as Thornton Force (34/695744), then across the hills to the Beezley Falls and back down the River Doe, 34/705745. As our job was to list the pteridophytes in the area for English Nature and the owners of the Falls, Ingleton Scenery Company, we were granted a separate parking plot and allowed free access. Another member, Betsy Kohler, joined us for the day. A short survey at the start of the valley produced *Equisetum arvense* and a large stand of *E. telmateia*, with *Asplenium trichomanes* subsp. *quadrivalens* growing on the mortared walls of the old railway bridge. Ascending the first valley it could be seen that the ferns occupied very clearly differentiated habitats. *Polystichum aculeatum* was abundant among the boulders and rocky limestone outcrops on the steep slopes between the path and the river. The woodland above the path supported *Asplenium scolopendrium, Athyrium filix-femina, Dryopteris dilatata* and *D. filix-mas. D. affinis* agg. was rarer but was readily distinguished by its distinctive upright growth form. It proved possible to identify two of the subspecies, subsp. *affinis* and subsp. *borreri*. As we climbed higher, *Polypodium interjectum* was noted on woodland banks and on fallen trees and we began to see *Cystopteris fragilis* on rock outcrops.

Emerging from the wood at the first waterfall, 34/694744, *Blechnum spicant, Oreopteris limbosperma* and *Phegopteris connectilis* were observed in good quantity growing on acid shale. Once onto the limestone, we made a stop for lunch, cups of tea from the small wooden refreshment stand nearby being most welcome. A walk up over limestone grassland to Thornton Force followed, and we continued towards good limestone outcrops with much *Asplenium ruta-muraria*. Then the descent was made beside the River Doe, where *Gymnocarpium dryopteris* was seen in several places.

Following a stop for tea (and cakes!), the weekend was completed by a visit to a fourth limestone pavement, that between Feizor and Potscar, 34/792682. This yielded the most abundant *Dryopteris submontana* and *Gymnocarpium robertianum* yet, together with luxuriant *Asplenium trichomanes-ramosum* and its ramose form, bifurcated at the tip of each frond. It was a good ending to a most enjoyable weekend and thanks from us all are extended to Jack whose thorough preparation and organisation made it all possible. Thanks are also due to English Nature, the National Trust, the Ingleton Scenery Company and the five farmers who kindly gave permission for us to search for ferns off the public footpaths.

ARGYLL, SCOTLAND – 29 July - 3 August

Anthony Pigott

A return visit to a favourite place after 11 years, led again by the King of *Dryopteris*, Hugh Corley, whose enthusiasm for this genus and its complexities is undiminished. We visited a mix of well known sites and new unexplored ones and generally enjoyed (relatively) good weather and not too much attention from the notorious midges. The group was rather disappointingly small but at least gave the advantage of flexibility. One of our number, Rose Murphy, had come particularly to see *Dryopteris affinis* morphotype *cambrensis* in quantity – she had certainly come to the right place.

1. *Ardcastle Woods* (16/9491) – 29 July. An extensive area of primarily conifer plantation, but with much variation in shade and slope giving a number of interesting habitats. You could easily spend a whole week in these woods. One ditch had similar sized plants of *D. affinis* morphotypes *affinis, cambrensis* and *borreri* neatly lined up in a row for easy comparison!

2. *Creag Fheargach* (16/9493) – 29 July. Opposite Ardcastle Woods on the other side of the road, a forestry track rising steeply up the hillside.

3. *South of Claonaig* (16/8655) – 30 July. The famous oak wood containing a huge population of *Dryopteris* x *sarvelae*. The rain was heavy but we were not deterred from checking the extent of this presumably single clone. It has shown no sign of decline since its discovery some years ago. No plants of its parents were found although *D. expansa* is believed to be not far away.

4. *Near Eascairt* (16/8452) – 30 July. Woodland close to the road.

5. *Near Crassaig* (16/8351) – 30 July. More roadside woodland and hedgerows further south on the Carradale road. Nothing much new or exciting.

6. *Grignan Forest* (16/7939) – 30 July. Steep slopes down into the forest from a very long forestry track. This was pure exploration, driving along until some combination of contour, light and vegetation seemed a good place to stop. Eventually, we found a very good spot, rich in ferns, especially *Dryopteris*, but completely hidden from the track. Places like this remind one how habitats that might well be considered something of a vascular plant desert, and therefore unimportant from a conservation point of view, can often be full of pteridophyte riches. We found many *D. affinis* plants, the common morphotypes, *paleaceo-lobata*, some *D.* x *complexa* candidates, other oddities and one that Hugh thought might be the form he calls 'CCB', of which more later.

7. *Old Poltalloch* (17/8000) – 31 July. A long stretch of woodland running almost down to the sea (Loch Craignish), made interesting by the presence of horizontal slabs of rock outcrop forming natural terraces. These terraces are covered in a thin layer of humus and mosses, forming a fine nursery habitat for many ferns. We looked for a small creeping *D. dilatata*-like plant which Hugh believed grew there but we only found small creeping *D. dilatata*.

8. *Near Ford, Loch Awe* (17/8703) – 31 July. Roadside woodland near the south-west end of Loch Awe.

9. *Near Fincharn, Loch Awe* (17/9004) – 31 July. More of the same, nothing notable.

10. *Near Barnaline, Loch Awe* (17/9714) – 1 August. More forestry with a large patch of wet tussocky grass near the road which contained many huge plants of *D. carthusiana*. We wondered whether some of them might be *D.* x *deweveri* from their width and vigour, but all seemed to be producing good spores.

11. *Delavich, Loch Awe* (17/9612) – 1 August. More of Inverliever Forest, further west along the north shore of Loch Awe. More of the usual forestry ferns, including *D. aemula* and *D. expansa*. We found another of those wonderful spots where some local wind damage to the trees had opened up opportunities for lush growth of ferns. Of particular interest was a rather strange somewhat *D. carthusiana*-like plant, which may repay further study.

12. *Loch Coille Bharr, Knapdale* (16/7890) – 1 August. Another famous *Dryopteris* place, but this time we approached the loch from the car park at the north end, travelling through dense, very dark woodland. There were many very large plants of *D. affinis*, most of which were difficult to identify. The extreme folioseness of the plants along with the strong suspicion of *D.* x *complexa*, made us all unsure of what was there. Out of the wood and in quite an exposed position, we found a patch of rather strange mt. *affinis*-like plants which we puzzled over until we realised that it was probably the unfamiliar exposed form of mt. *convexa*, subsequently confirmed when we found much more typical plants on the edge of the wood.

13. *Dunardry Woods, near Cairnbaan* (16/8190) – 2 August. An extensive area of mixed woodland with good tracks running through it. There were further examples of how ferns in very deep shade can develop extreme characters. Perhaps the high-point was the discovery of a small population of a form of the *D. affinis* complex that Hugh quickly identified as his 'CCB'. This is Hugh's original shorthand for its putative genome combination (C for *caucasica*, B for *borreri* – the old name for *affinis* generally). Its morphology certainly fits the bill but that combination isn't generally believed to exist and would need another diploid combination for its formation – but then we actually know very little about the cytology of many of the *D. affinis* morphotypes so who knows?... (I think I'd better stop this discussion now and save it for another place!)

photo: B. Porter

Hugh Corley deliberating over *Dryopteris* at Cairnbaan, Kintyre.

14. *Between Kilmelford and Loch Avich* (17/8811) – 2 August. On the steep open slopes above the road to Loch Avich. Those that had been here before remembered it as a small patch of – *D. oreades*, glimpsed in driving rain; this time fine weather allowed an extensive search which revealed a very extensive area with many fine and large plants. The size of some fronds emphasised the misnomer of the 'Dwarf Male-Fern' – *D. oreades* grows as big as any other male-fern in the right conditions.

15. *Near Kilmartin* (16/8398) – 2 August. The two remaining members of the party completed the meeting with an examination of the woods by the road south of Kilmartin (south of the tea shop in Kilmartin would be more relevant!).

Pteridophytes recorded during the Argyll meeting (courtesy of Barbara Porter).

Nomenclature follows the *New Flora of the British Isles* (Stace, 1991)
as on the new BPS record cards.

Site	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Asplenium adiantum-nigrum															✓
A. ruta-muraria															✓
A. trichomanes subsp. trichomanes					✓										
A. trichomanes subsp. quadrivalens							✓								✓
Athyrium filix-femina	✓	✓		✓	✓	✓	✓	✓	✓	✓			✓	✓	✓
Blechnum spicant	✓	✓	✓	✓	✓		✓	✓		✓	✓			✓	
Cystopteris fragilis							✓								
Dryopteris aemula	✓	✓				✓	✓				✓	✓			
D. affinis mt. affinis	✓	✓		✓		✓	✓					✓			
D. affinis mt. borreri	✓	✓		✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	
D. affinis mt. cambrensis	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	
D. carthusiana	✓	✓								✓	✓				
D. dilatata	✓	✓	✓	✓	✓		✓	✓		✓	✓				
D. expansa	✓					✓					✓				
D. filix-mas	✓	✓				✓			✓	✓		✓	✓		✓
D. oreades														✓	
D. x sarvelae			✓												
Equisetum arvense							✓		✓				✓		
E. sylvaticum	✓									✓	✓				
Hymenophyllum wilsonii	✓														
Oreopteris limbosperma	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	
Phegopteris connectilis	✓			✓	✓	✓	✓				✓		✓	✓	
Phyllitis scolopendrium															✓
Polypodium interjectum															✓
P. vulgare	✓		✓	✓	✓			✓	✓	✓				✓	
Pteridium aquilinum	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	

LECTURE MEETINGS AND DAY VISITS 1996

FERN HARDINESS SYMPOSIUM, KYRE PARK, WORCS. – 20-21 January

A diverse group of hardy pteridologists braved the winter weather to attend this thought-provoking meeting, which proved to be the social highlight of the BPS calendar! A broad spectrum of topics was covered, a fuller account of which will appear in the *Pteridologist*.

Following a guided tour around the extensive tracts of Kyre Park, the programme of lectures began with a general introduction to the topic from Graham Ackers and an outline of what he hoped this meeting would achieve.

This was followed by Jennifer Ide's guide to some of the biological factors responsible for hardiness in plants. The dearth of knowledge on pteridophyte hardiness was further emphasised later by Alastair Wardlaw's account of his trawling through the on-line literature. With the pteridomaniac audience showing remarkable tolerance of things non-ferny, the day concluded with Bob Brown's observations, which demonstrated that flowers are just as perverse and unpredictable in their ability to survive the British winter.

photo: A.R. Busby

Fern Hardiness Symposium, Kyre Park

Kate Pryor, Janet Sellers, John Collins, Dania Kowalska, Joan Ruston, Jon Sellers, Johannes Vogel *(back)*, Margaret Nimmo-Smith, Alison Paul, Barry Jackson, Andrew Leonard *(back)*, Alan Ogden, Hazel Rickard, Keith Holly, Fred Rumsey, Graham Ackers, Rita Coughlin, Barry Thomas, Ray Coughlin, Peter Lynch *(back)*, Lynda Thomas, Doreen Holly, Doreen Brotherton, Margaret Collins, Betsy Kohler, Martin Rickard, Clive Brotherton, James Merryweather, Peter Boyd, Jennifer Ide, Neil Timm, Anthony Pigott, Alastair Wardlaw. *Kneeling:* Rebecca Taylor, Mary Gibby, Marc Thomas, Jessica Barrett.

(Participants not in photograph: Matt Busby, Michael Pollock, Bob Brown, Margo Pigott.)

Day two opened with Matt Busby introducing us to the wide range of ferns which have been tried in the gardens of the midlands and a plea that more garden-worthy plants be sought out at higher altitudes in the tropics and elsewhere. We then had the RHS trial and award system explained by Mike Pollock – perhaps one day a suitable pteridological subject for these trials could be found; maybe tree-ferns, a subject close to Martin Rickard's heart (and wallet!). He followed up his interesting article in *The Garden* magazine with a very comprehensive look at all of the tree-fern species which people have attempted to grow in the British Isles. Again the general desire to see more species of horticultural potential introduced was expressed. Uppermost in many minds was 'how to get them through the winter': the evolutionary progression of protection from half haystack to minimalist fleecy wrapping either shows Martin is becoming more reckless, or Hazel has finally had an overdue aesthetic influence. It was therefore good to see the lengths taken by Alastair Wardlaw to defeat the Glaswegian climate. One was left deeply impressed by his tenacity and ability to build just about anything from corrugated plastic!

The meeting highlighted just how many ferns of borderline hardiness members have succeeded with but it was generally felt that much more information on what could be grown, where and how, could usefully be collected. That the excellent BPS booklet by Richard Rush, now sadly out of print could not be revised and built upon was lamented.

A very enjoyable weekend was concluded with a marvellous meal and thanks to the wonders of modern technology, a synchronised toast with/to Jimmy Dyce!

Our thanks to Graham Ackers for organising the meeting and to Martin and Hazel and their co-habitees, Janet and Jon, for playing host to so many and so well.

Fred Rumsey

FERN HARDINESS SYMPOSIUM – ADDENDUM

One of the principle aims of both amateur and professional societies is the exchange of information amongst members. The British Pteridological Society achieves this admirably – informally at our many meetings, and more formally in our excellent publications. Those publications often contain the fruits of individual research (particularly the *Fern Gazette*), but we have no regular process for research at a Society-wide level.

To my knowledge, there have been two notable exceptions to this. One was the publication (in collaboration with the Botanical Society of the British Isles) in 1978 of the *Atlas of Ferns of the British Isles*, with contributions from many BPS members via the record cards they submitted. The other was Richard Rush's BPS special publication in 1984 *A Guide to Hardy Ferns*, which resulted from his own experiences, literature search and a census of known fern growers.

The aim of the Fern Hardiness Symposium was not only to enable information and experiences to be exchanged, but also to encourage ideas for future research that could be undertaken by BPS members. Some of those ideas will be documented in the 1997 *Pteridologist*, when the Symposium proceedings will be published. This note is a trailer for that publication, to encourage members to consider, in the meantime, what we as a Society could do.

Generically, I think there are three types of research possible:

1. *Census*. Many BPS members already possess a wealth of knowledge about growing ferns, and one way to unlock this is to conduct structured censuses on specific issues,

e.g. what degrees of wetness are marsh-loving ferns grown in, and with what results?; to what extent are attacks by thrips being experienced?

2. *Trials*. Society-wide experiments are possible with careful design, e.g. participants, spread across the country, could grow three named *Polystichum* species in a variety of pre-defined micro-habitats, and record their performance. An experiment of this type could result in a quantum leap in our knowledge, to date gained largely from anecdotal and unrelated observations.

3. *Investigative*. One of the other Societies to which I belong, the Marine Conservation Society, includes marine biological surveys within its activities. Such field surveys are aimed at understanding and documenting the ecology of particular areas, but there is no reason why this approach cannot be extended to include the observation of plants with horticultural potential in the wild. This might involve trips abroad, but much desk work could also be done by an exchange of information with fern friends and colleagues around the world.

At the Symposium, we discussed some form of BPS Special Publication as one end result of such research. I feel that a Society such as ours is well placed to push forward the boundaries of our knowledge on fern cultivation, and we should take the opportunity to do so. Pending publication of the full Symposium proceedings, I would be pleased to hear from members with any ideas for BPS research projects – what is it we would most like to know about the hardiness and cultivation of ferns? Even more importantly, I would love to hear from members willing to run any such projects! Please write to me at the (new) address below.

Graham Ackers

REQUEST FOR INFORMATION!

The Society will be holding a National Meeting in April 1997 in Warwick on the natural environments of North American ferns. Would any members who have visited N. America in a ferny context please contact the programme organiser, Graham Ackers, at: Deersbrook, Horsham Road, Walliswood, Surrey RH5 5RL, tel./fax 01306 627330.

SPRING INDOOR MEETING, NHM, LONDON – 2 March

It was a rare treat for me to watch the Committee disappear in the morning and then get on with looking at ferns. As usual, the Museum team had laid on a very interesting menu. The Atlantic islands forming Macaronesia are exciting places for ferns and the Museum staff had sorted out herbarium sheets, maps and books to whet our appetites for Fred Rumsey's talk in the afternoon. *Cheilanthes* species attracted a lot of attention as usual and the large scaly fronds of *Elaphoglossum* looked very handsome, especially with the help of a microscope. *Polypodium macaronesicum* is finer and more delicate than our British species.

The first talk in the afternoon, given by Michael Zink, was a whistle stop tour of the Far East, starting in Nepal. The spectacular views of the Ganesh Himal are a fine setting for a wide variety of ferns including *Azolla, Dryopteris* and *Athyrium* in the paddy-fields. The dominant trees seem to be junipers and *Rhododendron arboreum*, with *Cyathea spinulosa* getting in on the act. Long tassels of *Vittaria*, and *Lepisorus thunbergianus* and *L. lauriformis* were very photogenic and we were assured that the latter grows well in a greenhouse. The great sprawling masses of Gleicheniaceae, e.g. *Dicranopteris*, made our bracken look modest and the new fronds were stunning. What a pity they are so obstinately difficult in cultivation!

Michael then took us to Japan and 200 species in three days! Having thoroughly confused us with blechnums and plagiogyrias, he admitted that the *Dryopteris* were even harder to identify. There were some remarkable red fronds in these groups. One of the real stars was a *Hymenophyllum*, one of many epiphytes. Food seemed as important here as the ferns, as it was in Taiwan. His final ports of call were Szechuan and Yunnan. There are 50 species of *Lepisorus* in Central China alone, *L. thunbergianus* being apparently abundant all over the Far East. A house roof covered with it reminded me of *Polypodium interjectum* at its most exuberant. Two other notable plants were a *Cheilanthes* with a white farina, and *Neocheiropteris palmatopedata* (like a glorified *Adiantum pedatum* but with simple pinnae).

Members' slides then took us to Tobago, where Graham Ackers noticed that *Adiantum villosum* grows like a weed on Little Tobago. The mangrove swamps, orchids, and tree-ferns on the main ridge, and the colourful *Blechnum occidentale* and *Pityrogramma calomelanos* were all interesting.

Finally Fred Rumsey guided us round the Azores. These tiny specks in the ocean have about 40-50 species of which ten are endemic to Macaronesia, five of those endemic to the Azores. Being wet, some islands e.g. Pico suit filmy ferns. *Hymenophyllum wilsonii* grows on the crowns of junipers and *Hydrangea* shelters *Trichomanes speciosum*. Other special vegetation includes 20 feet tall *Euphorbia stygiana* and 30 feet *Erica azorica*. Among the *Woodwardia*, *Deparia*, *Christella*, *Dryopteris* and *Polystichum*, *Dryopteris azorica* caught my eye. Others in their 'home territory' included *Ophioglossum azoricum*, *Diphasiastrum maderense*, *Isoetes azorica* and *Marsilea azorica*. *Lycopodiella cernua* forms miniature trees. Of the smaller ferns, *Asplenium azoricum* and *A. monanthes*, plus *A.* x *sarniense*, *Cystopteris diaphana* and *Anogramma leptophylla* were all shown but my personal favourite was *A. hemionitis*. Epiphytes included *Elaphoglossum*. Apart from the ferns, the 18th century lava fields, fumarole tunnels, caldera rims of volcanoes and hot springs make this group of islands very interesting.

Nick Hards

KEW GARDENS, SURREY – 18 May

We were very grateful to Peter Edwards for organising a full programme at the last moment when Bob Johns was sadly called back to New Zealand for his father's funeral.

The day started with refreshments in the staff room of the herbarium where BPS book sales and merchandise were available. There was also a display of some of the posters produced for the Holttum Memorial Symposium held at Kew in 1995, with some of the presenters available to discuss them. People were then invited to examine the living collections before reassembling in the Kew Guild Room after lunch.

The afternoon began with a brief talk by Nigel Taylor, the Curator of the Living Collections Department, on the politics and law of plant collecting and usage under recent legislation. He outlined some of the problems now encountered: plants should, of course, only be collected with full permission and appropriate permits (even in the UK) and imported into this country with due regard for CITES, the Convention on Biological Diversity and quarantine regulations even for research purposes. Commercial use – whether connected with the pharmaceutical industry or horticulture – brings further cause for concern as under present international law genetic resources are owned by the country of origin and commercial exploitation of plant material should result in some reward for the country of origin, notably in the sharing of benefits,

whether in strict financial terms or in kind, such as via exchange of materials or expertise. Members should note that *bona fide* requests in writing to the Curator for samples of living plants to grow for your own personal pleasure or for research purposes are treated sympathetically when regulations allow, but do not just help yourself to those at Kew or elsewhere!

Andrew Leonard continued with a stimulating travelogue of ferns of Tenerife in the Canary Islands following another of his visits to the island. Nigel Rothwell gave an interesting illustrated talk on some of his findings and experiences on a Kew expedition to the Temenggar Forest Reserve in west Malaysia with Peter Edwards. This area had become accessible for botanical exploration for the first time for 55 years and the fern collections made showed it to be rich, with many species proving to be new for Malaysia.

Jennifer Ide showed us how the 'Plantlife and the Conservation of the British Flora' slide collection could be used to present information to diverse groups of people to communicate the message about concerns of habitat loss and species reduction.

Finally, Rob Cooke, BPS Conservation Officer, gave an illustrated talk on the Conservation of British Ferns. He showed that some relatively common British ferns are not frequent elsewhere and so their conservation is at least as important as that of rarer British species such as *Woodsia ilvensis*, which is common in Scandinavia but on the edge of its distribution in Britain.

Especial thanks go to Peter for arranging such a full programme at the last minute and for providing refreshments and to Nigel Rothwell who not only gave a talk but guided us around the Lower Nursery and put on a magnificent display of diverse and mature fern plants at the back of the Kew Guild Room.

Patrick Acock

OXFORD UNIVERSITY BOTANIC GARDEN & HARCOURT ARBORETUM, NUNEHAM COURTENAY – 7 July

Eleven members arrived at the Danby Gate inside the Botanic Garden soon after the gates opened on a 'sunshine and showers' Sunday morning. After inspecting the unnamed *Polypodium* hybrid in the rock garden, we traced our steps along the Theo Dyer fern border. This had been entirely lifted and replanted the previous winter, as due to constant additions of layers of compost every year, the level had become too high and dry up the garden wall. It is now lower and most of the ferns were looking good.

When the rain arrived we migrated to the greenhouses and were all impressed by a tropical *Ophioglossum reticulatum* which was sporing profusely and also the *Marsilea aegyptiaca* in the tropical house and a small collection of tree-ferns. In the temperate fern house a discussion as to the correct naming of various ferns took place.

Members might be interested to learn that after the death of Henry Schollick in 1991 (BPS president 1972-1975) the gardens received his papers, including copies of the Garden archives, which enabled the replanting of the 1648 herbaceous border with the 'correct' species; the original archives had been deliberately destroyed in the 1940s.

After a picnic lunch in the arboretum car park viewed by young peacocks, Nick Hards joined us to narrate the history of the tree collection. He showed us some impressive trees, and bracken eight feet high and other common fern species growing under the rhododendrons plus several *Osmunda regalis*. We were all impressed by a fine group of

beautiful red *Dryopteris erythrosora*. Some members returned to Oxford to inspect the Hollys' garden and enjoy some tea.

Doreen Holly

MIDLANDS FERN SHOW, WARWICK UNIVERSITY – 29 July

Twenty-six members and guests gathered at the University of Warwick's Institute of Education at the Westwood Campus for the second Midlands Fern Show. The morning started with refreshments and chit chat while members staged their ferns and also arranged their ferny exhibits, part of an innovation entitled 'ParaFERNalia'.

During the morning, members paid a visit to Matt's garden in Kirby Corner Road, just five minutes walk from the Institute. In the front garden we examined varieties of *Dryopteris affinis* including 'Revolvens', 'Stableri', 'Pinderi Crispa', 'The King' and 'Polydactyla'. Near the front window were other species of non-British *Dryopteris*. Matt explained that he had found that *Dryopteris affinis* and its varieties withstand several hours of direct sunlight mainly because of the local heavy clay which may go hard and shrink but never dries out. Down the side of the house we found a collection of lady fern varieties which included 'Frizelliae', 'Multifidum', 'Cristatum' and 'Vernoniae'. Both hostas and hellebores, together with lily of the valley and Solomon's seal, are planted amongst them. Furnishing two narrow borders at the back of the house were several cultivars of the hart's tongue fern, *Asplenium scolopendrium*, including 'Ramosum', 'Cristatum Silver Queen', 'Muricatum', 'Marginatum' and 'Ramosum'. Sadly, Matt's 'Spiralis' had recently died.

photo: A.R. Busby

Members inspecting exhibits at the Midlands fern show.

For a small garden (25x100ft/8x30m) there are an incredible number of different ferns. Among the many *Polystichum setiferum* cultivars is the delightful 'Gracilimum'. Matt's collection of osmundas is recognised by the National Council for the Conservation of Plants and Gardens as a National Collection. All the usual *Osmunda regalis* varieties are there plus 'Gracilis' and 'Decomposita'. At the top of the garden is a polytunnel (8x15ft)

which houses several foreign hardy ferns. The original idea was to house foreign hardy ferns of suspect hardiness in a dry winter environment without heat, however, there are one or two British ferns in there and Matt explained that he felt it was time to lift, divide and replant the ferns in the tunnel.

We returned to the University for lunch and to raid the bring and buy fern sale which raised over £90, just enough to cover the day's expenses. While the judging of the fern show was taking place, members toured the ParaFERNalia Exhibition. Exhibits comprised pottery and porcelain, including a Victorian chamber pot decorated with fern fronds, postcards and a unique set of cigarette cards featuring ferns, various fossils, jewellery featuring fern fronds and glassware. In the centre of the room, Clive Brotherton staged a display of *Cheilanthes*. Steve and Karen Munyard were present with a selection of books from the Society's Booksales.

At 2.30 p.m. the moment we had all been waiting for arrived when the judges reported that they had finished their deliberations and we were allowed to view the show exhibits. Now the judges themselves were to be judged by members when they saw the awards given to the exhibits!

The judges were Clive Brotherton and Rita Coughlin and the results were:

Class 1 – One Pot Fern (any kind or variety)
1st Mr A. Kyte, 2nd Mr R.J. Smith, 3rd Mr A. Hoare (4 entries)

Class 2 – Three Pot Ferns (any kind or variety)
1st Mr A. Kyte, 2nd Mrs M.E. Nimmo-Smith, 3rd Mr R.J. Smith (4 entries)

Class 3 – One Pot *Equisetum*
1st Mr P.J. Acock, 2nd Miss J.M. Ide, 3rd Mr P.J. Acock (6 entries)

Class 4 – One Pot Aquatic Fern
1st Miss J.M. Ide, 2nd Mr P.J. Acock (2 entries)

Show Secretary's Comment: "The quality of the exhibits was very good and presentation was improved. Mention must be made of a superb diminutive form of *Asplenium scolopendrium* labelled as 'Dwarf', no more than about five inches (12cm) high which was exhibited by Alf Hoare. Close inspection seems to show that it is a persistent fasciated form and, unfortunately, sterile."

A big thanks to Matt Busby for organising another successful event which we hope will be repeated next year, also to Rita Coughlin and Clive Brotherton for judging the show and to Doreen Brotherton and Brenda Smith for taking charge of the refreshments, Margaret Nimmo-Smith for organising the plant sale and to Margaret and John Collins for stewarding the fern show. Thanks also to all the members who attended, especially those who exhibited their ferns and ferny bric-a-brac.

Margaret Nimmo-Smith

AUTUMN INDOOR MEETING, YORK – 12 October

James Merryweather was host to the BPS at the University of York for the Autumn Indoor Meeting and the Annual General Meeting which was well attended with almost forty members present. Three illustrated talks featured Home, Europe and the Empire: tree-ferns from 'down under', Scottish delights (the home component) and something European featuring Cretan wildlife.

Alastair Wardlaw opened the meeting with a well-illustrated talk on tree-ferns in south-east Australia and New Zealand. The main emphasis of his presentation, and of his seven week tourist trip, was to survey native tree-ferns in Australia and New Zealand

for their hardiness. Tree-ferns do experience drought and frost 'down under', and some of them may be suitable for growing outside in parts of the British Isles. His excellent talk and account, which I hope can be published elsewhere, sparked a very animated discussion on how and where to grow tree-ferns.

photo: J.S. Wardlaw

Alastair Wardlaw with Cyathea australis beside the Barham River, Apollo Bay, Victoria, Australia.

During the lunch-break posters were presented by Heather McHaffie (Edinburgh University) on carvings of ferns on gravestones, and by John Edmondson (Dept. of Botany, Liverpool Museum) on the work of James Bolton of Halifax, the illustrator and author of *Filices Britannicae* (1790).

In the afternoon, following the AGM, James Merryweather talked about botanising in eastern Crete, and illustrated this with slides of Mediterranean wildlife, ferns and the local hostelries.

Heather McHaffie concluded the meeting with a fascinating account of her ongoing research on *Athyrium flexile*, entitled "Finding flexile and losing friends". In 1852 a variety of *Athyrium distentifolium* with narrow fronds and deflexed pinnae was first found in Glen Prosen by the two Backhouses of York, father and son. Newman described it as a separate species in 1853 and it was subsequently found in up to twenty locations across the central Highlands of Scotland. Ben Alder became known as the site with the largest population and there are no records of the Glen Prosen site having been visited since 1894. In 1995 Heather tried to relocate the site in Glen Prosen but there did not seem to be any appropriate north-facing corries. However, after an abortive examination of east-facing cliffs, the fern was eventually found nearby. Subsequent visits demonstrated that the area did indeed hold late-lying snow and, although south-facing, the slope was at a sufficiently high altitude to be frequently in the cloud and extremely cool. A noble succession of friends have accompanied her on regular monitoring expeditions in zero visibility. Fortunately, none have yet been lost and most have volunteered to repeat the excursion in the hope of actually seeing the head of the glen. Her research into the status of this variety is continuing and we are eager to hear more from her in the near future.

We are grateful to James for organising an excellent meeting in comfortable surroundings and for providing refreshments.

Johannes Vogel

REGIONAL MEETINGS 1996

MIDLANDS

A.R. Busby

I regret that for a second year I have failed to organise any meetings in this area. I would be pleased to hear from any midland members who have ideas or offers of venues for local meetings for 1997.

LEEDS & DISTRICT

Ripon, North Yorkshire – 20 July

Bob Adams

Seven members met in the car park of the Half Moon pub in Sharow near Ripon, North Yorkshire, on what turned out to be a swelteringly hot day. The morning was spent visiting a site (44/333713) where *Thelypteris palustris* had been recorded up to approximately twenty years ago, but after a heroic struggle by the group through mud, tree roots and stands of climax Himalayan balsam we were disappointed. The only pteridophytes seen were *Dryopteris filix-mas*, *D. dilatata* and *Equisetum arvense*. *Asplenium ruta-muraria* was noted growing in a wall (44/320719) as we repaired to the Half Moon for lunch.

In the afternoon we visited a garden in Ripon owned by a descendant of the Bolton brothers and containing part of the historic Bolton Collection of ferns. The owner and his wife were away on holiday unfortunately, but their son kindly arranged for us to see the ferns. He gave us a very interesting account of the history of the collection and of the Bolton brothers themselves, showing us some of the gold, silver and bronze medals won by them at horticultural shows in the late 19th and early 20th centuries. The collection comprises mainly cultivars of the native species *Polystichum setiferum*, *Athyrium filix-femina* and *Asplenium scolopendrium*. We then went to see the son's own garden where we saw some more ferns from the collection including a very large and fine example of *A. filix-femina* with cruciform pinnae and a superb foliose form of *P. setiferum*.

The day ended with a visit to Hell Wath (44/309693), a local nature reserve, to see some *Ophioglossum vulgatum* which was particularly numerous this year, over a hundred spikes being counted earlier in the season.

Especial thanks to Paul Taylor for the trouble he took in letting us see the Bolton ferns.

Bilton Gorge, Knaresborough, North Yorkshire – 17 August

Barry Wright

On a typical scorchingly hot day a particularly keen sorus of pteridologists assembled at the Woodland Trust car park on the Knaresborough to Ripley road (44/330584). Here we met with our leader, Jack Bouckley, and the local expert and all-round Bilton Gorge enthusiast Keith Wilkinson, the chairman of the Bilton Gorge Conservation Society. Despite being keen to get out of the heat and into the wood we were fascinated by Keith's account of how the gorge had been safeguarded and how, even though it is on the doorstep of Knaresborough, it has escaped the attentions of botanists and naturalists for too long. Our job for the day was to redress this balance, at least as far as the fern flora was concerned.

After plunging into the thickly wooded valley and crossing the river Nidd we turned east along a path. We quickly notched up *Dryopteris filix-mas*, *D. dilatata* and three morphotypes of *D. affinis: robusta, affinis* and *borreri*.

Where the path turned uphill we didn't. Off into the undergrowth we ventured (most of us) discovering *Blechnum spicant* on the way towards a more calcareous section of the wood supporting *Polystichum aculeatum* and *Polypodium vulgare*. Unexpectedly, we found several colonies of *Equisetum hyemale* growing in small streams that joined the river. Back to the path to rejoin the less venturesome (more sensible) members of the party for a brisk walk past a stand of *Pteridium aquilinum* on the way to the Gardeners Arms for lunch.

As we left the pub we passed a wall with *Asplenium trichomanes* subsp. *quadrivalens* and *Dryopteris filix-mas* growing on it. Shortly afterwards we walked down a disused railway line past *Equisetum arvense* before delving back into Bilton gorge at its western end (44/311580). On our meandering way back to the car park we found occasional colonies of *Athyrium filix-femina*, *Equisetum sylvaticum*, *Asplenium scolopendrium*, and an exceeding threatened patch of *Phegopteris connectilis*. All-in-all a valuable set of records for the Bilton Gorge Conservation Society and the BPS. Thanks to Jack and Keith for organising the day.

Lathkilldale, Bakewell, Derbyshire – 14 September **Ann Robbins**

Over Haddon was bathed in late autumn sunlight when the nine of us met in the car park (43/203664). Down the steep-sided dale we started to see ferns almost immediately in the dry-stone walling at the side of the road. *Asplenium trichomanes* subsp. *quadrivalens* and *A. ruta-muraria* were here and also to be seen throughout the day. Another *Asplenium*, *A. scolopendrium*, was also a recurring theme. It was interesting to compare the different forms this fern took, here on the wall the fronds were short and wide, later, on a tall (40ft), sheltered and shaded cliff-face the fronds were longer and narrower, and at one point an interesting undulating or crisped form grew. This last example was pointed out to the group by Ron Cole who led the meeting jointly with Betsy Kohler and me.

Once we had reached the dale (43/202661) we turned right (west) along the bottom of the dale where the river Lathkill used to run. The river bed was totally dried up along its whole length, a condition I have not seen in previous years. On the right of the path were several outcrops of limestone and we found the rustyback fern *Ceterach officinarum* on one of these outcrops along with further examples of wall rue and common maidenhair spleenwort. *Cystopteris fragilis* grew in plenty on stone walls and rocky outcrops. *Dryopteris dilatata* was recorded in the woodland and a possible hybrid of male fern and *D. affinis* was seen, lots of golden scales but no black mark on the rachis; a sample frond was selected to send off to Clive Jermy at the Natural History Museum. Very good examples of *Polystichum aculeatum*, one of my favourite ferns, were seen growing at the base of walls and in the shade of the trees.

Asplenium adiantum-nigrum was found by Barry Wright; it grew among the stones of an old building (43/196661), probably left from the times that lead mining was practised in the dale. *Polypodium vulgare* was found along wall tops and on rock ledges. *Pteridium aquilinum* was also seen but not until near to the point where the woods petered out and the dale opened out into a wide, grassy banked vale (43/181657). We spent some time looking on the scree slopes for *Gymnocarpium robertianum* but without success, which was strange since I could remember seeing quite large colonies growing in a very similar environment near Millers Dale in 1994.

WESSEX

Jim Jarvis

Mendip Hills, Somerset – 2 June

There wasn't a cloud in the sky and the day was warm, ideal for photography. The late spring had delayed the *Botrychium lunaria* at Priddy (31/548515) so that there were shoots at all stages from just emerging to fully expanded. After expending too much film on a difficult subject we walked on to the site of the old lead works where the problem became one of arranging the four *Asplenium* species in one frame.

In the afternoon we moved a couple of miles to Charterhouse (31/505557). The condensation flues have been 'restored' with the loss of all the ferns that grew in them so, saddened, we walked on to Ubley Warren where we found *Cystopteris fragilis* in abundance, added *Polypodium interjectum* to the list and found a couple more glossy, crowded, pinnate *Polystichum setiferum*. Back at the car park we spent a few minutes explaining the workings of the lead recovery process to two ladies who were looking for Second World War decoy sites, (it takes all sorts – admittedly the remains of the buddles do look a bit like bomb craters) before making our way back to the M4 avoiding both Bath and Bristol.

During the day we saw (and photographed) *Asplenium ceterach*, *A. ruta-muraria*, *A. scolopendrium*, *A. trichomanes*, *Athyrium filix-femina*, *Botrychium lunaria*, *Cystopteris fragilis*, *Dryopteris affinis*, *D. dilatata*, *D. filix-mas*, *Equisetum arvense*, *E. fluviatile*, *Polypodium interjectum*, *Polystichum setiferum* and *Pteridium aquilinum*.

Wye Valley – 10 August

We met in the car park at Symonds Yat Rock (32/569158) and walked south along Forest Rides to Old Stone Well before descending to the Wye. We crossed the river to the Dropping Wells at the Biblins (32/553144) and spent some time carefully examining the *Asplenium trichomanes* subsp. *pachyrachis* that grows there. The number of plants was much reduced from those seen in April 1991 (last year's drought?), but the site does extend further upstream than had been appreciated. The subsp. *pachyrachis* seemed to be confined to the wetter parts of the rock faces, with subsp. *quadrivalens* growing both above and beyond the less common plants.

We had just finished lunch when the thunder started to roll so we crossed the steel wire suspension bridge in some haste and started to search the rock faces on the Gloucestershire bank for the subsp. *pachyrachis*. We didn't find any. We didn't find any on the walk to New Weir (32/561157) either, despite being encouraged by an overheard remark at the Coventry meeting in July that the subspecies was common at Symonds Yat. We kept on looking as, soaked through and through, we squelched our way back to the cars.

We saw *Asplenium scolopendrium*, *A. trichomanes* subsp. *pachyrachis* and subsp. *quadrivalens*, *Athyrium filix-femina*, *Blechnum spicant*, *Dryopteris affinis*, *D. dilatata*, *D. filix-mas*, *Polypodium interjectum*, *Polystichum aculeatum*, *P. setiferum* and *Pteridium aquilinum*, but I still don't think there is any *pachyrachis* in Gloucestershire.

Forest of Dean, Gloucestershire – 11 August

We met at the car park above Soudley Ponds (32/662117). There are three stream systems draining southwards in the main wooded area of the Forest of Dean, from west to east, Cannop, Blackpool and Soudley Brooks and as one travels eastwards the number of ferns (species and plants) falls noticeably. The path around Soudley Ponds is

a very pleasant Sunday morning walk, even on a wet day, but there are few ferns. Howard found a grass snake and a *D. carthusiana* plant and there were *Athyrium filix-femina, Dryopteris affinis, D. dilatata* and *D. filix-mas* by the stream with *Asplenium scolopendrium* growing in the walls of the dams.

After lunch Mr and Mrs Matthews went off to Attwools at Whitminster in search of serious camping equipment and Dr and Mrs Holly and I drove to Foxes Bridge Bog (32/631125). The ground and the vegetation were very wet and the bracken was very thick so we didn't venture far into the reserve but we did see a very handsome *Athyrium filix-femina* with a wine-red rachis among the green. At their invitation we repaired to the Speech House Hotel and over a pot of tea put the world to rights.

Frome Valley, Stroud, Gloucestershire – 8 September

Six members of the Gloucestershire Naturalists turned up outside Syde Church (32/949108) on an overcast, damp Sunday morning. They were all quietly confident that they could walk as far as me so we set off on a circular tour of Brimpsfield, Climperwell, the woods at the start of the Frome Valley, Caudle Green and back to Syde. The ferns were few and far between but there were birds, butterflies and flowers, a castle earthworks, some quite remarkable modern architectural ironwork at Brimpsfield and a motocross rally at the bottom of Hazel Hanger Wood.

Much time was spent with field guides and fronds so I think that by the time we got back to Syde we all knew what we had seen: *Asplenium ceterach, A. ruta-muraria, A. scolopendrium, A. trichomanes, Athyrium filix-femina, Dryopteris affinis, D. dilatata, D. filix-mas, Polypodium interjectum, Polystichum aculeatum, P. setiferum* and *Pteridium aquilinum.*

SOUTH-EAST

Chelwood Gate, Ashdown Forest, & Wakehurst Place, Ardingly, Sussex

11 May – (Leaders: Pat Acock & Paul Ripley) **Paul Ripley**

Thirteen members and friends met at Chelwood Common, Ashdown Forest (51/423271) to visit one of the best *Dryopteris aemula* sites in the Sussex Weald. *En route* we passed through enchanting woods where bluebells and other spring flowers were at their peak. The abundance *of Blechnum spicant* testified to the prevalent acid conditions. Also common were *Dryopteris filix-mas, D. affinis* agg., *D. dilatata* and *Pteridium aquilinum. Polypodium* (probably *P. interjectum)* and *Asplenium scolopendrium* were also seen.

Dryopteris carthusiana was seen at the entrance to Annwood, and *Athyrium filix-femina* was common in wetter areas. In spite of the destruction caused by the 1987 'hurricane' and the resultant invasion of scrub and brambles, *D. aemula* was abundant on the steep stream-sides, although fronds were far from fully opened.

Four more members joined us for the afternoon's visit to Wakehurst Place, RBG Kew's country offshoot. *Polystichum setiferum* and *Dryopteris affinis* morphs. *affinis* and *borreri* obviously occurred naturally, completing the tally of native species. *D. aemula* appeared to be thriving at the well-known rock site, but was also seen on steep stream-banks. Ferns of note in planted areas were *Matteuccia struthiopteris, Osmunda regalis* and *O. claytoniana. Polypodium vulgare* was seen by some of us in a planted bed.

New garden areas had been recently created, some with a geographical theme, and a Japanese garden was being constructed. Ferns were planted in groups, well presented,

although all were commonly grown species. Finally, all of us enjoyed afternoon tea in the restaurant, and can particularly recommend the meringues.

Old Warden and Ampthill, Bedfordshire – 9 June — Mark Border

This Sunday found about twenty members of the South-East group enjoying a beautiful sunny morning at the Swiss Garden near Old Warden in Bedfordshire (52/1645). Those of us who arrived first had the opportunity of watching a hornet enter the roof of the shelter in which we were awaiting the rest of the party. Swiss Garden is undergoing restoration following several years of neglect. Many of the original features were still evident, and of course a lot of the trees are very impressive having achieved maturity, especially the cedars and monkey puzzles. The Fern Grotto, the main reason for our visit, could, with a little effort and water, be magnificent, but at present only the *Pteris cretica* is really doing well.

If the gardens were, pteridologically, a little disappointing, the half hour spent in the woods outside certainly wasn't. Two large polystichums were quickly spotted because of their very foliose nature. There was much discussion as to their identity, *P. aculeatum* being the first choice, as there were many definite *P. aculeatum* surrounding the plants. Steve Munyard opted for hybrids so a search began for *P. setiferum:* two groups were quickly found including several plants with forked fronds. The hybrid theory gained considerable ground and Steve took a couple of fronds away to try to confirm his idea; unfortunately they proved to be too young to identify with certainty. *Dryopteris filix-mas, D. dilatata, D. carthusiana* and *Athyrium filix-femina* were also seen, mainly as a by-product of the *P. setiferum* search. These woods certainly deserve further investigation.

After a leisurely lunch at the Bull Inn where the Craddocks joined us, we drove in convoy to their house in Ampthill.

How does one describe the Craddock's garden? "!" is probably the nearest I can get. Fabulous, fantastic and unbelievable were all words I heard used by overwhelmed visitors. The first things you notice are the famous Craddock Palms (*Trachycarpus fortunei*), several in flower. Beneath these is a 'lawn' of mainly *Dryopteris* species and varieties. On separating a few fronds for a closer look you find another layer of smaller ferns: polypodies, blechnums, beech and oak ferns plus many others. The whole day could easily have been spent here without seeing all the plants.

Two ponds, a cold frame, two greenhouses and a wonderfully shady pergola over the upper terrace comprise the hard landscaping, nearly everything else is a fern or horsetail, although a fine *Rhododendron* and a superbly cut ivy also caught my eye. Ferns are even to be found under the bench seats, including several fine *Asplenium marinum*. Lovebirds share the top greenhouse with ferns on benches and several *Woodwardia* are planted out. Between the greenhouses a bed (3 feet x 18 inches) contains at least six species of tree-fern, the cyatheas with fronds over six feet high. The lower greenhouse contains the National Collection of *Davallia*, itself a sufficient reason for the visit without all the other ferny attractions.

Unfortunately, my wife and I had to leave before the afternoon's refreshments but from the preparations being made I have no doubt the traditional high standards of SE Region catering were more than matched. I can only conclude by thanking the Craddocks for a fantastic day and recommending anyone who is fortunate enough to have an opportunity to visit Ampthill to do so – you are in for a real treat!

Fairlight Glen and St Helen's Wood, Hastings, East Sussex – 14 September (Leader: Stephen Munyard)

Paul Ripley

A good number (23) of members and guests arrived at Fairlight Glen (51/8511) on a beautiful early autumn morning. This site has been visited before and is noted for its moist rocky ghylls, where *Polystichum setiferum* and *Asplenium scolopendrium* are abundant. We were, however, unprepared for the remarkable crested, undulate and muricate varieties of *A. scolopendrium* which have not been noticed before. Other ferns seen were *Athyrium filix-femina*, *Polypodium* (probably *P. interjectum* – fortunately we had our resident lumberjack, Pat Acock, with us, but the ferns had few sori), *Blechnum spicant*, *Pteridium aquilinum*, *Dryopteris dilatata*, *D. filix-mas*, *D. affinis* subsp. *borreri* (and possibly also *affinis)* and *Equisetum telmateia*. We were also pleased to see plants of violet helleborine *(Epipactis purpurata)* in flower.

After lunch at the Robert de Mortain, we went to St Helen's Wood (51/8111), an oasis in suburban Hastings, again sandstone, with a small stream creating moist habitats. Ferns were not abundant, but we saw all the above species with the exception of *Polypodium*. Again we were fortunate to notice a most unusual muricate form of *A. scolopendrium*, unfortunately rather dry.

We then repaired to Stephen and Karen Munyard's house, with its remarkable garden. Steve's intense interest in natural history is evident in the many different habitats created – I particularly enjoyed the microclimate in one greenhouse, where exotic species of frogs enjoy the environment created by a pond and species of tender ferns. Ponds elsewhere in the garden provide opportunities for additional variety in what is, in summer, quite a dry garden. We also enjoyed Karen's marvellous tea! We spent some time enjoying the feast – also the feast of ferns and literature elsewhere in the house. Thank you, Karen, for such a superb spread, and Steve, for a well-researched and fascinating day. Unfortunately I had to leave, but many members stayed to observe the regular evening visit of foxes and badgers to the garden.

Igtham Mote, Kent – 5 October

Patrick Acock

The final meeting of the year drew over twenty members from far and wide. We met at Shipbourne for lunch and perused four spleenworts on and below the church walls (51/5952). These were *Asplenium ruta-muraria*, *A. scolopendrium*, *A. adiantum-nigrum* and *A. trichomanes* subsp. *quadrivalens*.

We then drove on to Igtham Mote (51/584535), an Elizabethan manor house. In the wooded area we saw very mature plants of *Dryopteris affinis* subsp. *borreri* along with *D. dilatata*, *D. filix-mas*, *D. carthusiana*, *Pteridium aquilinum* and *Polypodium interjectum*. The lane banks up from the manor house have now been designated a nature reserve by the National Trust and have an interesting flora. Although the mowing regime is not good for ferns we were surprised and delighted to see *Polystichum aculeatum*, a plant not common in Kent, growing well.

We then returned to Paul Ripley's house to admire his wide range of hardy ferns flourishing in their magnificent woodland setting. Paul is constantly adding to and developing the collection and has the space to expand in. This year's better conditions have allowed the plants to develop more fully.

A cynical adherent often suggests that the teas are the reason for the SE Group's success and it is true that we are never disappointed; thanks must go to Linda, Paul and Katie for serving us with a marvellous tea. Afterwards we had a very varied range of

slides to remember the season by. These included slides from Trevor Lording and Howard Matthews, Andrew Leonard on the French GEP meeting to the Alps, Paul Ripley on the Argyll and Yorkshire meetings, Graham Ackers on Trinidad and Crete and Jennifer Ide on ferns featured on gravestones.

EAST ANGLIA

Margaret Nimmo-Smith

Suffolk – 2 June

Seven of us assembled in the morning at the Rex Graham nature reserve near Barton Mills in the Thetford Forest to see the military orchid in an SSSI managed by the Suffolk Wildlife Trust. We were accompanied by Michael Chinery who knew the site well. The site, in a small disused chalk pit, now has a raised walkway to enable visitors to view the orchids without trampling on the plants. There is quite a sizeable colony of the orchid, with about a quarter of the plants flowering. Other interesting plants included twayblades and *Daphne mezereum*. We were also fortunate enough to be shown a small colony of *Ophioglossum vulgatum*. The only other ferns seen in the vicinity were a few plants of *Dryopteris filix-mas*. We then did a small circuit in the forest and found one small area with many young *D. dilatata* plants. We also searched for *Botrychium lunaria*, reported from a path near where we parked our cars, but nothing was to be seen, perhaps because it had been very dry for the past month. (Phone Suffolk Wildlife Trust HQ on 01473 890089 for details of open days in 1997.)

Lunch was eaten at the West Stow Country Park, best known for its reconstructed Saxon village. In the afternoon we travelled about half a mile to the garden of Bernard Tickner, which is situated on the site of an old mill on the River Wensum, surrounded by woodland and several acres in extent. Large stands of *D. dilatata* were spotted in the wood just outside the garden boundary. This is a beautifully maintained garden with many rare and unusual plants, especially euphorbias, lilies and plants from the Mediterranean, especially Crete. He also has a small collection of hardy ferns including male fern varieties, large plantings *of Matteuccia struthiopteris* and *Onoclea sensibilis*, and aspleniums, including *A. adiantum-nigrum* and *A. trichomanes*.

Our final visit was to the home of Barrie and Rosemary Stephenson for tea. Barrie's garden is small but now developing well, with ferns mainly planted in two dug out grotto areas. Many of the ferns were raised from his own spore sowings, particularly some interesting forms of *Athyrium filix-femina*. Rosemary had laid on a magnificent tea and those who were able to stay longer than I, had the opportunity to peruse the extensive collection of fern books. Many thanks to Barrie for organising the day and to Bernard Tickner for a most interesting garden visit.

NORTH-WEST

Holker Hall Show – 31 May - 2 June

Sally Beamish

The BPS North-West Group struck gold this year with a stand at the Great Garden and Countryside Festival – a three-day event held annually in the beautiful parkland setting of Holker Hall in South Cumbria. The stand, our second 'public appearance', was awarded the Gold Medal and Best In Show for Society exhibits against some very able competition. Entitled 'Ferns of a Golden Afternoon', the display included conservatories of both the hardy and hothouse ferns that became so popular in the fern craze of late Victorian times, along with information on the founding of our Society in Kendal. Designed and constructed by local members of the NW Group, the making of

this exhibit revealed a wide range of often unexpected talents within our small group, and exposed the great depth of knowledge and passion that members have for their subject. Many fine old ferns appeared on the display despite the cold, slow growing season, giving visitors a taste for the potential of ferns in the garden and the home.

The non-plant star of the stand was Nan Hicks who, dressed in the full Victorian costume of a Lady Fern Owner, proved to be literally a show-stopper. Charming the judges of the Best In Show award with her genteel smile, she encouraged them to find favour in ferns against the might and colour of the Alpine Garden Society. However, her ability to sit so serenely amidst the cool, green fronds of 'her' collection, caused some consternation to early visitors to the show, who thought her a waxworks model until she turned on her smile! Her efforts in turning out so splendidly really gave everyone's hard work on the stand a finishing flourish.

photo: courtesy M. Garstang

Marjorie Garstang & Sally Beamish setting up NW Group stand at Holker Hall show.

During the three days of the show those manning the stand were kept constantly busy with people showing a new interest in ferns, or wishing to talk of ferns and fern gardens that they had known. As a result, some new members were recruited and everyone helping on the stand had a thoroughly enjoyable time.

Talk of old fern gardens has prompted the idea that, in conjunction with the newly-founded Cumbria Gardens Trust, a record of all known fern collections or gardens with fern interest in our area should be made. This would help new owners of old gardens realise the worth of their ferns, and enable old plants under threat of destruction to be saved – a particularly important task bearing in mind the wealth of native fern varieties originally collected from this area. Hopefully, work on this important project will begin in 1997.

Thirlmere & Launchy Gill, and Borrowdale Gardens, Cumbria – 15 June

In contrast with the busy A591 which runs along the eastern side of Thirlmere, the minor road which skirts its western shore is generally quiet and well suited to leisurely travel. From the roadside opposite the lake, steep slopes and crags rise abruptly, densely covered with trees, flowering plants and ferns, while several becks find their way into the lake through rocky gills. This was the site for the North-West Group's first field meeting of 1996.

Sixteen members met at the lay-by at 35/306169 on a clear warm morning and, having walked briefly northwards up the road to see the only *Cystopteris fragilis* of the day, then made their way south towards Launchy Gill. The roadsides were thick with

common ferns, including *Dryopteris filix-mas, D. affinis, D. dilatata, Athyrium filix-femina, Pteridium aquilinum* and *Oreopteris limbosperma*, while the walls housed considerable numbers of *Asplenium trichomanes, Polypodium vulgare, Cryptogramma crispa* and several tufts of *Asplenium ceterach*, a plant which is extremely uncommon in central Lakeland.

Where Launchy Gill reaches the road a brief exploration was made of its rocky sides, and specimens of *Hymenophyllum wilsonii, Polystichum aculeatum* and *Blechnum spicant* were found. The route now steepened as it followed the Forest Trail by the side of Launchy Gill, passing close to dense colonies of *Phegopteris connectilis* and *Gymnocarpium dryopteris* before climbing out into a more open area of boulders and scree. Here, *Huperzia selago* was quickly found and careful searching brought to light a few clumps of *Dryopteris expansa* and *D. oreades*. By way of a bonus, a small colony of flowering lesser twayblade *(Listera cordata)* was also found.

After lunch we briefly visited a bridge deep in the plantations and three further species were added to the list: *Dryopteris carthusiana, Asplenium adiantum-nigrum* and *A. scolopendrium*. This brought our days total to 22, all enjoyed in glorious sunshine and with superb views, particularly from the Launchy Gill path.

Mike Porter

The day would have been worthwhile if it had ended after our Launchy Gill exercise, so ably led by Mike Porter, but there was so much more in store in the afternoon!

We visited three gardens in Borrowdale starting with the exotic ferns and lovely location of Mrs Lopez' garden, the site of the once famous Askew Fern Garden. Mrs Lopez is Mr Askew's granddaughter and she made us very welcome; we do appreciate her kindness. A few ferns from the original nursery still survive in the grounds, including *Dryopteris affinis* 'Grandiceps Askew'. Next we visited Nan Hicks' famous garden. Here we took pleasure in another plantsman's beautiful garden which contains a fairly comprehensive collection of hardy ferns, thriving in this area of high rainfall. Nan provided us with a splendid tea.

To round off an excellent day we were treated to yet another glorious garden at Brackenburn overlooking Derwentwater. Professor Ellwood gave us a most interesting conducted tour of the superb garden he has created recently. It contains many special groups of plants, including a new collection of ferns.

The final treat was the journey north on the west side of Borrowdale with more native ferns, rounding off a very successful day. Our thanks to all who helped to make it so.

Alex Tate

Warton Crag, Carnforth, Lancashire (34/492724) – 29 June **Peter Hindle**

This is an area of Carboniferous limestone with a mild, moist climate and a strong maritime influence, as we appreciated on this blustery, damp day. The highest point is 163m. Soils are either thin lime-rich rendzinas or deeper acid brown soils derived from loess. The former had light vegetation with much *Pteridium aquilinum*, while the latter were quite well wooded in many places.

Though this was a field excursion rather than a detailed study of the whole area we were surprised not to find examples of either *Cystopteris fragilis* or *Blechnum spicant* and only a single specimen of *Asplenium adiantum-nigrum*. It was the more open areas which provided us with our most interesting finds. Some coppicing had fairly recently been done and it was in these disturbed areas that we discovered several small patches

of *Ophioglossum vulgatum*. A short distance away but in the same type of habitat we were rewarded by the sight of a number of large clumps of *Botrychium lunaria*. These were a 'first' for many members of the group, though both species had been previously recorded in the locality. Close by were some well-developed specimens of *Dryopteris carthusiana*, which had not previously been recorded here.

On the limestone we found *Asplenium trichomanes* and *A. ruta-muraria* but surprisingly few examples of *A. scolopendrium*. In the grykes were well-grown plants of *Polystichum aculeatum* and *Gymnocarpium robertianum* and a single fine specimen of the former was also located in deep woodland shade. The dry-stone walls yielded a good crop of *Polypodium interjectum*, and the whole area was well supplied with both *Athyrium filix-femina* and *Dryopteris filix-mas;* good finds were also recorded of both *D. dilatata* and *D. submontana*. After much close examination of several specimens and detailed discussion by some very experienced members it was decided that we had found *D. affinis* subsp. *affinis* growing in deep woodland. Members were also puzzled by three specimens in the same area of the wood which we finally decided were a crested corymbiferous form of *D. filix-mas*.

Our day ended with a visit to the garden of Mr and Mrs Colin Bolton in Warton village which is home to many fine specimens from the famous Bolton collection. Many thanks to them and also to Dr Jennifer Newton, Warden of the Lancashire Wildlife Trust Reserve, who led us round.

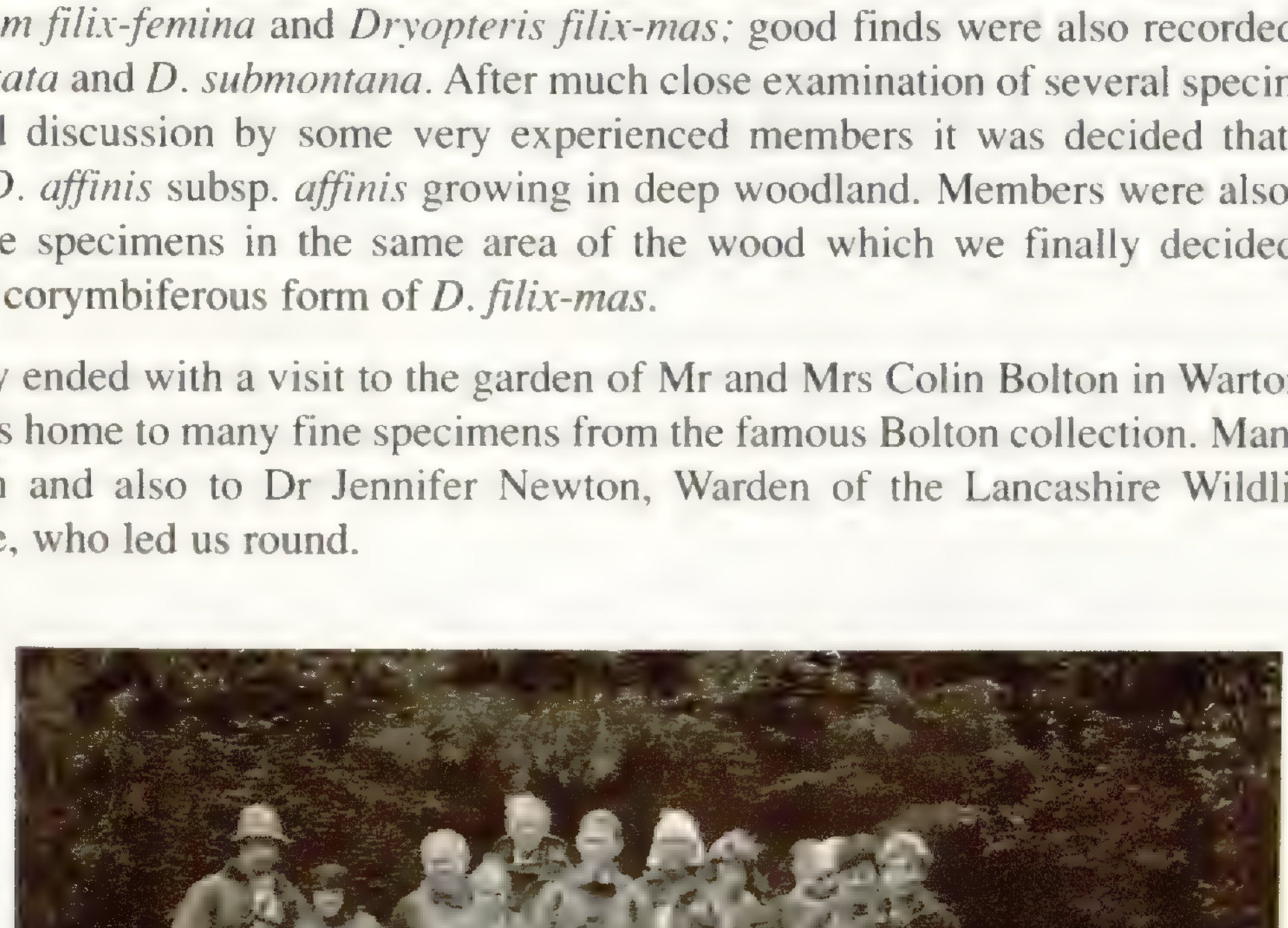

photo: courtesy M. Garstang

Looking at ferns in the garden of Mr & Mrs C. Bolton, Warton.
Robert Crawford & Karen, Harvey Shepherd, Bernice Owen, Peter Hindle, Ken Trewren, Frances Haigh, Anne Hughes, Ann & Brian Haskins, Joan Hindle, Marjorie Garstang.

Walney Island and Piel Island, Furness, Cumbria – 27 July Jack Garstang

The North Walney National Nature Reserve covers most of the land north of Walney Airfield to the tip of the Island and shows a variety of habitats: sand and shingle beach, coastal sand-dunes, heath, scrub, saltmarsh, extensive disused gravel ponds and derelict farmland. It is bisected by the 1m isohyetal and exhibits a wide selection of flora and

fauna. It is overlooked from the north by Black Coombe (an extinct volcano) and by the magnificent panorama of the Lakeland fells.

On a fine sunny morning with a slight onshore breeze, twenty members and friends met at Earnse Bay car park (34/170700). One mile further north we met the new Warden of the Reserve, Richard Cooper of Cumbria Wildlife Trust, who accompanied us throughout the walk.

Passing over the dunes into the dried-out gravel pits we found vast areas of *Equisetum fluviatile*, and *E. arvense* and *E. palustre* were common. Plants somewhat reminiscent of *E. pratense* were found but on closer examination they proved to be *E. arvense*. *Ophioglossum vulgatum* was numerous and two further sites of adder's tongue were found on our route. *Dryopteris filix-mas, D. dilatata* and *Athyrium filix-femina* were seen as we crossed the heath to the scrub, where *Dryopteris carthusiana* was abundant, being widely spread over several acres. Old land drain ditches were home to scores of large mature *Osmunda regalis;* young plants of royal fern were also spreading along the perimeters of nearby gravel ponds. *Blechnum spicant, Oreopteris limbosperma, Athyrium filix-femina* and *Dryopteris expansa* were all on the peaty, slightly more acid eastern side, along with large clumps of possible *D.* x *deweveri*. *Pteridium aquilinum* covered many of the dunes at the north end of the Reserve. An unexpected find was a large colony of *Polypodium vulgare* and *P. interjectum* at the foot of a sand-dune. The most exciting discovery was a large colony of *Equisetum variegatum* adjacent to *Salix repens* which, so we were told, produces around its roots a cocktail of mycorrhiza, possibly providing nutrition for the horsetail.

After a quick snack, Richard was warmly thanked for all his help that morning and on a previous reconnaissance, and was presented with a copy of the Jermy and Camus field guide *(The Illustrated Field Guide to Ferns and Allied Plants of the British Isles*. 1991).

We drove seven miles south to Snab Point where two more members joined us for the one and a half mile walk over the sands to Piel Island. This can be done safely during a five hour slot, two and a half hours either side of low water.

The field guide used on this occasion was W.J. Linton's *Ferns of the English Lake Country* of 1865, containing mainly the collective information of a Mr F. Clowes of Windermere. The boulder and cement walls of the 12th Century Piel Castle were recorded as the site of *Asplenium marinum* and 131 years later we confirm it is still there. Keeping it company are *A. adiantum-nigrum, A. trichomanes, A. ruta-muraria, Dryopteris dilatata, D. expansa* (maybe) and *Pteridium aquilinum*. Thirsts were quenched at the Ship Inn by the kind permission of the King of Piel, and a walk back over the sands in evening sunshine closed a magnificent day.

Fell End Clouds, Sedbergh, Cumbria – 14 September **Mike Porter**

Sixteen members met by the minor road a little north of Rawthey Bridge on a bright, sunny morning with the first nip of autumn in the air. The aim was to explore the extensive limestone pavements which lie on the western shoulder of Wild Boar Fell and to compare them with similar sites visited in previous years – Great Asby Scar and Hutton Roof.

The climb to the pavements was easy and uneventful, the first ferns to be noted being *Cystopteris fragilis, Asplenium trichomanes* and *A. ruta-muraria*. As height was gained, specimens of *A. trichomanes-ramosum* were found and, shortly afterwards, the limestone pavement proper was reached. This pavement differed considerably from

those seen in 1995 and 1994, the slabs being narrower and lying at a treacherous angle with dangerously sharp edges. As the leader had found the previous week, a fall on these pavements could be an unpleasant experience. However, despite the manifest dangers, a full examination was carried out and a fine collection of limestone ferns quickly found.

Considerable numbers of *Dryopteris submontana* were the first to be seen, past their best but still easily distinguishable by their grey-green colour. A little further on superb specimens of *Polystichum lonchitis* were noted, photographed, admired and counted. There were twenty-six plants in total, many of them well grown and in perfect condition, apart from some chewing at the tips of their fronds. A little higher were small quantities of *Gymnocarpium robertianum*, much the worse for wear at this stage of the season, *Polystichum aculeatum* and occasional plants of *Dryopteris filix-mas*. A plant which fitted well with the description of *Polystichum* x *illyricum* was seen but in the end it was decided that this was a young specimen of *P. aculeatum*. *Asplenium scolopendrium* was everywhere.

After this successful morning, lunch was eaten on the edge of the pavement, near a low crag where there were a few specimens of bird's-foot sedge *(Carex ornithopoda)* still to be seen.

The afternoon was given over to a leisurely exploration of a further area of limestone pavement in the unfulfilled hope of finding more *Polystichum lonchitis*. Nevertheless, a wide variety of plants were seen, including *Athyrium filix-femina* and, just before the final descent to the road, a beautifully crisped specimen of *Asplenium scolopendrium*.

AGM, Holehird, Windermere, Cumbria – 26 October **Marjorie Garstang**

Sunshine and spectacular autumn colours greeted the twenty-nine members arriving at Holehird for our third AGM. Many took the opportunity to walk around these beautiful gardens before the meeting began.

Indoors, the meeting reports and the photographs on display showed a very successful season and we are much indebted to the meeting leaders for all their preparatory work. The business part of the meeting was quickly concluded and the suggestions put forward for 1997 should ensure another interesting and varied programme.

Cynthia Kelsall and Malcolm Hutcheson then gave an excellent illustrated talk on their respective National Collections of Ferns held at Holehird and Sizergh.

The winners of the three competitions held were announced during tea: (a) Any British Fern – Nan Hicks, (b) A Greenhouse Fern – Les Dugdale, (c) The (fiendishly difficult!) Tree-fern Word Game & Limerick – Mike Porter.
The meeting closed at 5.00 p.m.

CORNWALL

Rose Murphy

Ethy Wood, Leryn, East Cornwall (20/130571) – 10 April

Ethy Wood is owned by the National Trust. For the first meeting of this new local group six of us met at the home of Caroline Thomas, near Lostwithiel. Mary Atkinson brought along some interesting specimens of *Polystichum* from woods near Lammerhooe Ford (20/399731). Both *P. aculeatum* (rare in Cornwall) and *P. setiferum* grow in these woods and *P.* x *bicknellii* (20/398732) proved to be there as well. After tea/coffee kindly provided by Caroline we set off for Ethy.

This is an ancient wood with much *Dryopteris aemula* growing on the steep banks by the woodland tracks, the banks covered with bryophytes and invariably supporting *Blechnum spicant*. A good list of ferns was made and these included *Dryopteris affinis* subsp. *affinis* and subsp. *borreri*, *D. dilatata*, *D. filix-mas* and *Polystichum setiferum*. Epiphytic polypodies were abundant on the oaks overhanging Lerryn Creek and Chris Page delighted us by demonstrating the way in which *P. interjectum* was growing on the lower branches and around the trunks of the trees, while *P. vulgare* grew higher up (rather difficult to reach, but it was done!). Between the two was the hybrid, *P.* x *mantoniae*. A picnic lunch in warm sunshine was followed by a visit to Tregays Wood (20/124583) where, by a spring (20/123583), we were shown the largest single plant of *Osmunda regalis* that any of us had ever seen, the rhizome/stock being over six feet (1.8m) across. Our thanks are extended to Caroline for obtaining access for us to this private wood and for making us so welcome at her home.

photo: courtesy C.N. Page

Mary Atkinson, Chris Page, Caroline Thomas, Rose Murphy & Zowie Keating in Rose's garden, Reskadinnick.

Porthcurno, West Cornwall (10/386223) – 18 April

Seven of the group met at my home in Reskadinnick and after tea/coffee and a look at the garden ferns, we drove down to Porthcurno. The aim this time was to make a search for *Asplenium onopteris*. A request had been made to check an old record for this fern, from 1978. Though not even *A. adiantum-nigrum* was seen and the day was wet, it proved a valuable visit. *A. marinum* was found on the coastal cliffs and *A. obovatum* subsp. *lanceolatum* on a churchyard wall at nearby St Levan (10/380221). *Athyrium filix-femina*, *Dryopteris dilatata* and much *Polystichum setiferum* grew in the coastal wood (10/386224) and *Polypodium interjectum* was plentiful both as ground cover over rocky banks and as an epiphyte on sycamore. *P. vulgare* was surprisingly rare and was found at only one site, on the land side of an old Cornish hedgewall, reached after a *very* steep climb (10/386222). After tea in a local cafe most of the group dispersed but on the way home three of us took a wrong turning and found ourselves in a fern-rich, wooded stream valley with *Dryopteris affinis* subsp. *affinis*, still winter-green,

Polystichum setiferum and so much epiphytic polypody (*P. interjectum*) that it was like being in a rain forest! We eventually located the valley as being at 10/572330.

Rough Tor, Bodmin Moor, East Cornwall (20/145807) – 10 July

Rough Tor is owned by the National Trust. Four of us decided to re-visit it in a further effort to re-find *Gymnocarpium dryopteris* and *Phegopteris connectilis*, last recorded here in 1930. Neither of them could be found, but both *Hymenophyllum tunbrigense* and *H. wilsonii* were plentiful, growing on the north side of the Tor under the granite clitter where trickles of water descended the slopes.

H. tunbrigense proved to be even more abundant, curtaining the sides of a 'cave' on the south side of the summit. *Dryopteris dilatata* was frequent but *Pteridium aquilinum* rather too abundant and there was just a single plant of *D. affinis*. *D. aemula* was found in two places, under a granite outcrop on the north side (20/144807) and near the summit (also 20/144807), an unusually high altitude for this fern. As we watched the mists descending in the late afternoon, completely obscuring the Tor, it was easy to understand how the fern could survive here; the mists had not cleared till half-way through the morning!

Fern Workshop – 21 August

Mary Atkinson kindly offered her home as a venue for a fern workshop which was attended by 15, including one member from Plymouth. Mary had collected various local ferns so that we could discuss the differences between them. Slides of others were shown (including some from the BPS visit to Argyll, thanks to Barbara Porter), and the workshop was aimed at all levels of expertise. This meant that we were able to consider structure, types of life-history and some species differences using *Hymenophyllum*, *Asplenium*, *Polypodium* and *Polystichum* as well as the *Dryopteris affinis* group. This was followed in the afternoon by a visit to Gordonshill Plantation on the banks of the Tamar (20/367841). It proved to be rich in *Dryopteris* and as well as the more usual woodland ferns we were able to see *D. affinis* subsp. *affinis* and subsp. *borreri* and a possible subsp. *cambrensis*. Mary's hospitality was much appreciated as we had lunch in her garden and considered her many ferns. The day ended with a general request for another session, this time on *Equisetum*.

Breney Common, East Cornwall (20/055613) – 19 September

Breney Common is a Nature Reserve owned by the Cornwall Wildlife Trust. It is an area of many different habitats – Western Heath, Molinia fen, Salix Carr, and woodland, with boggy areas, ponds and sites disturbed by old mining activities. For a small area it is rich in pteridophytes and 17 taxa were seen, ranging from *Pilularia globulifera* to two kinds of bracken, one of which may prove to be *Pteridium aquilinum* subsp. *atlanticum*, (it is being considered by Chris Page). Both *Dryopteris carthusiana* and *D. dilatata* grow here and a search was made for *D.* x *deweveri*, a hybrid that is proving rather elusive in Cornwall. *Equisetum fluviatile* and *E. palustre* were frequent in the ponds and marshes and *E. arvense* in the drier areas so it was not surprising to find a fine colony of *E.* x *litorale* by one of the boardwalks. *Osmunda regalis* and *Athyrium filix-femina* were frequent, but other ferns were rarer and more local. A small area of wood supported both *Dryopteris affinis* subsp. *affinis* and subsp. *borreri* and *Polypodium interjectum* was seen only as an epiphyte on willow and oak. However, this did not detract from the delight of the place and it was a good ending to our first year.

HORTICULTURAL SHOWS

MALVERN SPRING SHOW – 10-12 May

A.R. Busby

Midland members provided ferns for the Society stand at this year's show. Due to the prolonged cold spring only a handful of hardy ferns featured this year. Fortunately, we had a wide selection of indoor ferns to choose from and Clive and Doreen Brotherton kindly provided a couple of dozen beautifully grown ferns from their *Cheilanthes* collection. These, and my large *Platycerium bifurcatum*, always provoke much comment from the public.

The following ferns were shown in the competitive classes; it was disappointing to see so few ferns exhibited.

Class 3E – One Pot Plant grown for foliage effect: Reserve Award: Mr I. Yeardley *(Davallia* sp.)

Class 28G – One Pot Fern: 2nd Mr C.A. Loader *(Athyrium filix-femina* 'Frizelliae'), 3rd Mr G.A. Dudfield *(A. filix-femina* 'Minutissima') (no 1st awarded)

Class 4G – One Pan Hardy Fern: 1st Mr R.T. Dudfield *(Athyrium nipponicum* 'Pictum'), 2nd Mr C.A. Loader *(Adiantum pedatum)*

Our stand provided much interest and comment from the public and we were pleased to be awarded a Fifth Prize and to enrol one new member.

My thanks to John and Margaret Collins and Ray and Brenda Smith for setting up the stand and taking their turns to man it along with Alan Ogden and Clive and Doreen Brotherton. Without their help and support the entire venture would not be possible.

SOUTHPORT FLOWER SHOW – 22-24 August

A.R. Busby

After last year's heat wave, Southport Flower Show reverted to type, and exhibitors and visitors spent much of the time dodging very heavy thundery showers. However, the money spent on the new drainage system proved to have been well invested and we avoided spending the three days ankle deep in water.

This year's competitive fern classes proved to be very disappointing. Only three exhibitors were involved and two of our members, Libby Gibbs and Ray Smith, were responsible for virtually all the entries. It was with great regret that I was obliged to disqualify one entry as 'Not According to Schedule'. It was a simple matter of a species being included in a class for varieties. The quality of the exhibits was average, however, it is fun to consider which individual fern might qualify for the title of 'Best in Show' for the fern classes. Although there were two or three superlative davallias, I felt that for shape, proportion of size and perfection of cultivation, Ray Smith's *Adiantum raddianum* 'Matthewsii' would get my vote.

I was surprised and saddened to find that no-one had entered Class 12. Three *Asplenium*. Both Anne Beenham and Brian Russ were greatly missed as exhibitors this year but we were pleased to see Brian much recovered from his health problems of last year. It is such a pity that the success or otherwise of the only major competitive classes for ferns in Britain rests on the shoulders of just a handful of stalwarts.

This year's judge was A.R. Busby. The prize winners are listed below.

Class 6 Individual Championship: Four hardy, two greenhouse, two foreign hardy ferns: 1st Mrs E.A. Gibbs, 2nd Mr R.J. Smith (2 entries)

Class 7 Three Hardy British Ferns (dissimilar): 1st R.J. Smith, 2nd Mrs E.A. Gibbs (2 entries)
Class 8 Three Foreign Hardy Ferns: 1st Mrs E.A. Gibbs (1 entry)
Class 9 Three *Polypodium* (distinct varieties): 1st R.J. Smith (2 entries)
Class 10 Three *Polystichum* (distinct varieties): 1st Mrs E.A. Gibbs (1 entry)
Class 11 Three *Athyrium*: 1st Mrs E.A. Gibbs (1 entry)
Class 12 Three *Asplenium* (excluding *A. scolopendrium)*: (no entries)
Class 13 One British Fern (any kind or variety): 1st R.J. Smith (1 entry)
Class 14 One Greenhouse Fern: 1st R.J. Smith, 2nd Mrs E.A. Gibbs, 3rd Mr & Mrs T. Melling (3 entries)
Class 15 Three *Asplenium scolopendrium* (3 distinct varieties): 1st Mrs E.A. Gibbs (1 entry)

Some confusion arose concerning how the prizes were to be awarded. The trophy for the overall winner of the fern classes this year was to be given to the exhibitor who had won the most first prizes in classes 7-15 instead of the most points as in previous years. Both Mrs Gibbs and Ray Smith gained the same number of firsts so it was considered to be a draw and they both received a certificate but the trophy was withheld.

My sincere thanks to Ray and Brenda Smith for assisting with the furnishing and manning of the Society's stand and to Mrs Gibbs for assisting on the stand. My special thanks to Ray and to Libby Gibbs for flying the fern growing flag at this year's show.

Offers of assistance at Southport Show will be gratefully received.

JAMES W. DYCE MBE

It is with great sadness that we report the death of our President Emeritus. Jimmy Dyce, on 29th December 1996 while on holiday in Norfolk. A full obituary will be published in the next *Bulletin*.

THE AMERICAN FERN SOCIETY

The AFS invites all readers of this *Bulletin* to join the American Fern Society. Regular members receive the *Fiddlehead Forum* six times a year. This newsletter is published for the benefit of those who are interested in growing ferns, hunting for them, and expanding their knowledge of ferns. Journal members receive, in addition to *Fiddlehead Forum*, the scientific quarterly *American Fern Journal*. Membership costs $11 and $20 per annum repectively, including overseas postage ($14 and $31 if airmail postage required). For particulars please write to Dr David B. Lellinger, US National Herbarium, MRC-166, Smithsonian Institution, Washington DC. 20560, USA. Prospective members residing in Great Britain should write to Miss A.M. Paul, Dept. of Botany, The Natural History Museum, Cromwell Road, London SW7 5BD.

AFS SUBSCRIPTION PAYMENTS: Our societies have an exchange arrangement whereby members of the BPS can pay their AFS subscription through the BPS Membership Secretary and *vice versa*. Contact your Membership Secretary for details.

SECRETARIAL NOTES

ANNUAL GENERAL MEETING 1997, PRELIMINARY NOTICE – The 94th AGM will take place on Saturday 18th October 1997 at the Royal Botanic Gardens, Kew, Richmond, Surrey at 2.00 p.m.

COMMITTEE VACANCIES – In accordance with paragraph 3, section 3 of the Society's Constitution, two vacancies will occur due to the retirement of the two longest serving Committee members. Nominations are invited from members of the Society to fill these vacancies at the Annual General Meeting in 1997. The names of the nominees, proposers and seconders, together with a letter from the nominee indicating their willingness to serve, should reach the General Secretary by 9 September 1997.

SUBSCRIPTIONS 1997 – Members are reminded that subscriptions for 1997 are due on the 1st January 1997 and should be paid to the Membership Secretary, British Pteridological Society, c/o Dept. of Botany, The Natural History Museum, Cromwell Road, London SW7 5BD. Cheques should be made payable to 'The British Pteridological Society'. Current rates are given inside the front cover. **Standing Order** forms are available from the above address. Payment can now be made by **Credit Card** – see renewal form enclosed with this Bulletin.

PUBLICATIONS BY AIRMAIL – Our journals can be sent by airmail to overseas members, provided they advise the Membership Secretary and pay an additional subscription to cover airmail postage. See inside front cover for rates.

AFFILIATION TO THE ROYAL HORTICULTURAL SOCIETY – Our Society is affiliated to the RHS, enabling a limited number of members to enjoy certain privileges in connection with RHS Shows, competitions and services. There is one transferable ticket available for all RHS Shows other than the Chelsea Flower Show. Applications for tickets or further details, enclosing a stamped, addressed envelope, should be made to the BPS General Secretary.

READING CIRCLES – The Society operates a reading circle for several journals. The *American Fern Journal* is a quarterly publication containing much information for those seriously interested in ferns; it is accompanied by the *Fiddlehead Forum*, which publishes many 'ferny' items of interest to the amateur grower. The Royal Horticultural Society's journal, *The Garden*, is published monthly. To receive any of these journals apply to the General Secretary.

THE GREENFIELD FUND – This fund, set up as a memorial to one of our Society's great fern growers, Percy Greenfield, is used to finance approved research projects, helping with the cost of necessary equipment, books and travel expenses. Percy Greenfield's interest leaned very much towards the non-scientific side of our activities and it is felt that he would want this taken into consideration when decisions are made. Workers eligible for university or college grants and similar support are not therefore eligible for help from the fund. Members wishing to benefit from this memorial fund should apply to the trustees via the General Secretary.

THE CENTENARY FUND – This fund is used to promote the study of all aspects of pteridophytes – horticultural, scientific and educational, whether by amateurs, students or professional pteridologists. As such its scope is much broader and more flexible than the Greenfield Fund. Anyone wishing to avail themselves of this fund should contact the trustees via the General Secretary.

BACK NUMBERS OF JOURNALS – Back numbers of the Society's journals are available to members at reasonable prices. Many of the older journals are running out and are best obtained while stocks last. Patrick is able to offer the *Bulletin* vol. 2 minus part 2 for £4 including postage as a special offer again. A full list is available from Pat Acock, 13 Star Lane, St Mary Cray, Kent BR5 3LJ.

SPECIAL INTEREST GROUPS – There are now four Special Interest Groups. For further information please send a stamped addressed envelope to the organisers:
Aquatic Pteridophyta: Miss J.M. Ide, 42 Crown Woods Way, Eltham, London SE9 2NN.
Tree-ferns: M.H. Rickard, Kyre Park, Kyre, Tenbury Wells, Worcs. WR15 8RP.
Foreign Hardy Ferns: A.R. (Matt) Busby, 16 Kirby Corner Road, Canley, Coventry CV4 8GD.
Filmy Ferns: S.J. Munyard, 234 Harold Road, Hastings, East Sussex TN35 5NG.

BPS VIDEO 'BRITISH FERNS' – With over fifty species of ferns the British Isles has a remarkably varied fern flora. Many species have distinctive distributions reflecting regional variations in environmental conditions. In particular the cool, relatively damp environments of the North and the mild Western fringes of Britain bring together species typical of Atlantic, Arctic and Alpine regions, resulting in a fern flora that is unique to the British Isles.
This twenty-five minute video shows most of our native ferns growing in their natural habitats. It demonstrates the wide variety of size and form to be found in British ferns and the broad range of habitats they colonise. Attention is drawn to key identification characters for each species.
The video was funded by Schering Agriculture and the National Museum of Wales. It is available for loan, free of charge, to interested individuals and organisations (UK only). For further details write to the General Secretary enclosing an S.A.E.

MEMBERS INFORMATION SERVICE – Members often require information and advice on many aspects of Pteridophytes but are reluctant to ask or simply do not know where to obtain help. Queries from members on any aspects of the biology, identification or cultivation of ferns or fern allies should be sent to the Hon. Gen. Sec. accompanied by three first class stamps.

WANTED: ASSISTANT FOR SOUTHPORT FLOWER SHOW – The Secretary requires a reliable member to assist in the organisation and manning of the Society's stand at Southport Flower Show each year. An expert knowledge of ferns is not necessary but a keen enthusiasm for growing mainly hardy ferns and meeting the gardening public would be an advantage. Most expenses, including accommodation, may be paid by the Society. To apply and/or for further information, please contact A.R. (Matt) Busby on 01203 715690.

WANTED: ASSISTANTS FOR THE SPORE EXCHANGE SCHEME – Due to her increased workload, Margaret Nimmo-Smith requires help with the dispatch of spores to members. Please phone Margaret on 01223 365484 for further information on what is involved.

HONORARY MEETINGS SECRETARY – Nominations are invited from members for this important Committee post. For a detailed outline of the duties involved, please phone the General Secretary on 01203 715690.

MEMBERSHIP SECRETARY – Alison Paul wishes to relinquish this post at the end of 1997. If you think you could offer your services to the Society by taking on this job please contact Alison to find out what is involved. The BPS computer currently at the NHM will be available to her successor.

ANNUAL GENERAL MEETING 1996

MINUTES of the 93rd Annual General Meeting held in the Department of Biology, University of York, Heslington, York on Saturday 12th October 1996 at 2.15 p.m.

IN THE CHAIR: The President, Dr T.G. Walker.

PRESENT: E.J. & R. Baker, J.H. Bouckley, C. & D. Brotherton, A.R. Busby, J.M. Camus, R. Cole, R. Cooke, R. Coughlin, M. & L. Craddock, T. Craddock, J.R. Edmondson, J. & M. Garstang, P. & J. Hindle, J.M. Ide, A.C. Jermy, B. Kohler, A.M. Leonard, H.S. McHaffie, J.W. Merryweather, S. & K. Munyard, M.E. Nimmo-Smith, A.M. Paul, M.H. Rickard, R.W. & S. Sykes, B.A. Thomas, R.N. Timm, K. Trewren, J.C. Vogel, A.C. Wardlaw, J. Wilkins, B. Wright.

ITEM 1 – APOLOGIES FOR ABSENCE: R.G. Ackers, J.A. Crabbe, J.W. Dyce, N.J. Hards, R.J. Murphy, B. Porter, R.J. & B. Smith, P.H. Ripley, G. Stark, J.R. Woodhams.

ITEM 2 – APPROVAL OF MINUTES: Minutes of the 92nd AGM held on the 7th October 1995 had been published in the 1995 *Bulletin* and were approved.

ITEM 3 – MATTERS ARISING: None.

ITEM 4 – REPORT OF THE HONORARY GENERAL SECRETARY:

MEETINGS: Regrettably, I have not been able to attend any of this year's field meetings but in conversation with the leaders it would appear that they were very successful and we can look forward to reading the accounts of meetings in the 1996 *Bulletin*. My own meeting at Warwick in July is still failing to encourage members to show their ferns in large numbers but we shall persist with the idea in the hope that members will become interested and involved in exhibiting.

REGIONAL GROUPS: Most groups continue to function to the satisfaction of local members. Such meetings are open to all members, so if you are visiting an area that boasts a regional group, do ask the leader for details of meetings that may coincide with your visit. If any member is interested in starting a regional group, I would be happy to assist in any way.

MEMBERSHIP: The Membership Secretary, Alison Paul, informs me that we have enrolled 58 new members so far this year. On the other hand, we have lost 93 members due to deaths (5), resignations (38) and lapses (50). Our total membership stands at 762. Alison wishes to stand down as Membership Secretary at the end of 1997, so a volunteer to replace her is required.

PLANT AND SPORE EXCHANGE SCHEMES: Ray and Brenda Smith report another busy year with about 50 members taking part in the Plant Exchange. Members are encouraged to use this service. Ray and Brenda wish to emphasise that it is not necessary to have plants to exchange to take advantage of the scheme.
Margaret Nimmo-Smith has continued her work with the Spore Exchange Scheme. Regrettably, due to a very heavy workload, there has been an unavoidable delay in handling this year's requests. Margaret apologises for the delay and asks for your patient understanding; she promises to send out all outstanding requests as soon as possible. Margaret has notified the Committee that more help is required with the Spore Exchange Scheme. Any members who feel that they may be able to assist her are asked to contact her immediately.

MERCHANDISE: Mick and Linda Craddock continue to organise the Society's merchandising. Orders have slumped this year because no merchandise sheet/order form was produced. We shall ensure that an up-to-date sheet goes out with the 1996 *Bulletin*.

BOOKSALES: Steve Munyard reports that sales have been good but that he is having difficulty obtaining fresh stocks of second-hand books. He would like anybody with fern books for sale to allow him to make an offer for them. He will continue to try to obtain copies of new titles as they come onto the market. He reports that foreign books in particular seem to be good sellers.

SPECIAL INTEREST GROUPS: The four groups continue to seek interested members who should contact the following organisers: Tree-ferns – Martin Rickard, Aquatic Pteridophytes – Jennifer Ide, Foreign Hardy Ferns – Matt Busby, Filmy Ferns – Steve Munyard. Individual reports on these groups' activities will appear in the 1996 *Bulletin*.

COMMITTEE BUSINESS: Your Committee meets three times per annum and the amount of business to be considered often results in Committee meetings over-running, much to the anguish of its members. The Committee is setting up a Finance and General Purposes Sub-Committee to pre-consider much of the Society's business before a full Committee meeting thereby saving time and energy. At the moment the Committee is considering such diverse items as providing a home page on the Internet, insurance for both the Merchandise and Booksales organisers, obtaining sponsorship for various projects and seeking charitable status for the Society, in addition to the perennial problems of maintaining good housekeeping of the Society's finances and future meetings. Members can play their part in all this by offering to lead meetings and by suggesting how they think the Society's aims and activities might be improved.

It is our pleasure and delight to congratulate Martin and Hazel Rickard on winning the coveted Tudor Rose Award for the best floral display at the Hampton Court Flower Show and Anthony Pigott for the recognition of his *Equisetum* collection as a National Collection by the National Council for the Conservation of Plants and Gardens.

I usually find myself ending my report on a sad note and this year is no exception. During 1996 we have lost five members of long standing due to death. Frank Brightman of the South London Botanical Institute had been a member since 1960. Prof. Dr T. Reichstein of Basel, Switzerland had been a member since 1964. He was an Honorary Member and a noted Pteridologist although his original expertise was in organic chemistry. We shall always remember him not only as a distinguished member but also as a generous patron of this Society. Finally, many of us lost not only a member but a dear friend with the death of Ray Coughlin. He will always be in our thoughts as a kind and generous friend and we are pleased to see his wife Rita here today. To Rita and to the Reichstein and Brightman families we extend our most sincere condolences.

The report was approved and adopted by the meeting and the President thanked Mr Busby.

ITEM 5 – REPORT OF THE HONORARY TREASURER: Andrew Leonard circulated copies of the balance sheet for 1995 and was pleased to report that the Society's finances were in a very healthy condition. After he had answered one or two points raised by members, the report and accounts were approved and adopted subject to auditing, and the President thanked Mr Leonard.

ITEM 6 – REPORT OF THE MEETINGS SECRETARY: The Secretary gave a report from a fax received from Anthony Pigott that morning. He expressed his apologies for not being able to give his report in person but was pleased to announce that the 1997 meetings programme would be finalised shortly. It should include meetings in North Wales, Norfolk, Derbyshire, Devon/Cornwall and Scotland. Although Mr Pigott would not be standing for re-election as Meetings Secretary, he was willing to continue to work on the programme up to and including the summary ready to be printed in the 1996 *Bulletin*.

The President thanked Mr Pigott for his report and also wished to record the thanks of the entire membership to him for carrying out the duties of such a thankless task for the last eight years.

ITEM 7 – REPORTS OF THE EDITORS:

Fern Gazette – Prof. Barry Thomas reported that the second part of this year's *Gazette* should be out in December. He took this opportunity to report that due to a change of job combined with moving house, the new edition of *Welsh Ferns* had been delayed.

Pteridologist – James Merryweather reported that he had received mixed reviews at the publication of the new look *Pteridologist* but hoped to consolidate the advances made. He looked forward to receiving articles from members. The report of the Fern Hardiness Workshop held in January 1996 would be published in the next issue.

Bulletin – Alison Paul was pleased to have been able to circulate the 1995 *Bulletin* in January. It would be as early as possible again this year but this depended on the outstanding meeting reports being submitted promptly. She also appealed for photographs taken at this year's meetings to be sent in for possible publication.

The President thanked the Editors for their reports.

ITEM 8 – ELECTION OF OFFICERS AND COMMITTEE:

Election of Vice-President: It was proposed by Margaret Nimmo-Smith, seconded by A.R. Busby and approved by the meeting that Dr Nick Hards should be elected as a Vice-President of the Society.

Election of Officers: Both A.R. Busby and A.M. Leonard had expressed their willingness to stand for re-election as Honorary Secretary and Honorary Treasurer respectively and they were elected by the meeting.

Honorary Meetings Secretary: As A.C. Pigott was not standing for re-election and no candidate had been proposed, the post would remain vacant for the year. Nominations for this post are invited. The Meetings sub-committee will meet to consider future meetings.

Election of Editors: All Editors were standing for re-election. It was proposed by R.W. Sykes, seconded by E.J. Baker and approved by the meeting that the Editors be re-elected *en bloc*.

Election of Committee: The two longest serving members of the Committee due to retire were S.J. Munyard and G. Stark. The President thanked them for their service. Two nominees were Prof. Alastair Wardlaw, proposed by M.E. Nimmo-Smith, seconded by A.R. Busby, and Neil Timm, proposed by A.R. Busby, seconded by M.E. Nimmo-Smith. The remaining members of the Committee were: R. Cooke, J.M. Ide, P.H. Ripley, A.C. Jermy, H.S. McHaffie, E.J. Baker, J.M. Camus and M.E. Nimmo-Smith. It was proposed by J.H. Bouckley, seconded by S.J. Munyard and approved by the meeting that they be elected *en bloc*.

ITEM 9 – ELECTION OF HONORARY AUDITORS: The Secretary reported that Ray Smith had asked to stand down as an Auditor of the Society. In addition, members were sad to learn that he was in hospital at the time of the meeting.
It was proposed by A.R. Busby, seconded by R.J. Smith and approved by the meeting that Graham Ackers and Graham Hoare be elected as Auditors.

ITEM 10 – ANY OTHER BUSINESS:

a. Robert Sykes was pleased to inform the meeting that the North-West Group, under the guidance of Marjorie Garstang, won a Gold Medal, the Silver Challenge Cup and £280 at the Holker Hall Flower Show. The President congratulated Marjorie and the Group on their success.

b. Robert Sykes deplored the fact that none of the Committee were present at the excellent talk on tree-ferns given that morning by Alastair Wardlaw. The President replied that the Committee very much regretted that they could not take part in the morning's activities and they had been discussing ways of resolving this. The Secretary commented that up to a few years ago, the AGM and indoor meeting were held during the afternoon only. The President added that the formation of a Finance and General Purposes Sub-Committee should allow 'pre-digestion' of Society business thereby enabling shorter Committee Meetings and allowing the Committee to take a fuller part in the rest of the meeting.

c. Robert Sykes proposed a vote of thanks to James Merryweather for organising the day's most enjoyable meeting. The President was pleased to endorse this.

d. Ken Trewren suggested that it might be worth considering having the AGM as a weekend meeting. He felt that it was a pity that several members had travelled long distances just for this one day meeting. The Secretary pointed out that up to the 1940s, the AGM formed part of the Society's annual week-long excursion, usually in August. The President asked the Secretary to report these comments to the new Meetings Secretary when appointed.

As there was no further business the President thanked members for attending.
The meeting closed at 2.55 p.m.

A.R. Busby
Hon. Gen. Sec.

FINANCIAL STATEMENT AS AT 31 DECEMBER 1995

Notes to the Accounts

1. The Society had the following stocks of books at 31.12.1995 (1994 stocks in brackets): *Guide to Hardy Ferns* 0 (3), *Fern Names and their Meanings* 264 (297), *Cultivation and Propagation of British Ferns* 290 (322), *History of British Pteridology* 859 (863), *BPS Extracts & Papers* 460 (463).

2. Interest arises on 31st March on the Centenary and Greenfield Funds. No provision has been made for accrued interest.

3. Small floats were held by four officers at 31.12.1995. These are not included in the accounts.

4. The accounts reflect the subscriptions actually received in the year. Approximately £3,606 is subscriptions received in advance for 1996 but some subscriptions remain outstanding for 1995.

5. The Society's assets include a share in a computer and software at The Natural History Museum, cost £1,000.

6. BPS Booksales had assets of £3,829.90 at 31.12.1995.

7. The Centenary Fund had 192 (198) copies of *A World of Ferns* at 31.12.1995.

ORDINARY ACCOUNT

(1994)	INCOME:	1995
£10,869.59	Subscriptions	£12,209.37
83.91	Interest	171.85
200.00	Booksales	200.00
–	Spore Exchange	8.00
127.75	Merchandise	730.79
–	Plant Sale	49.00
81.00	Sundries	1,093.14
£11,362.25	**TOTAL INCOME**	£14,462.15
	EXPENDITURE:	
1,569.00	Pteridologist	1,872.00
2,160.75	Gazette	2,106.25
1,578.00	Bulletin	1,889.00
365.00	Printing & Stationery	1,298.48
2,450.33	Administration & Postage	2,429.33
30.15	Subscriptions to Societies	19.15
115.88	Plant & Spore Exchanges	1,014.88
482.25	Meetings	226.80
1,013.09	Merchandise	293.75
£9,764.45	**TOTAL EXPENDITURE**	£11,149.64
1,597.80	BALANCE for 1995	3,312.51
4,420.34	Brought Forward from 1994	4,018.14
(2,000.00)	Publications Account	(1,000.00)
£4,018.14	**Carried forward at 31.12.1995**	**£6,330.65**

CENTENARY FUND

5,221.38	Brought Forward from 1994	5,285.64
169.26	Interest	142.81
(125.00)	Grant	(400.00)
20.00	World of Ferns	48.00
–	Intercept	363.61
£5,285.64	Carried forward at 31.12.1995	£5,440.06

GREENFIELD FUND

1,751.70	Brought Forward from 1994	1,808.49
56.79	Interest	48.86
–	Grant	(413.00)
£1,808.49	Carried forward at 31.12.1995	£1,444.35

PUBLICATIONS ACCOUNT

(849.20)	Brought Forward from 1994	1,953.10
148.20	Offprints	293.75
–	Special Publication No. 1	(600.00)
191.50	Special Publication No. 1	14.40
77.50	Special Publication No. 2	101.60
343.50	Special Publication No. 3	131.50
12.00	Special Publication No. 4	20.40
19.50	Special Publication No. 5	22.50
–	Reprinting	(430.00)
10.10	Sundries	–
(46.90)	Balance	1,507.25
2,000.00	Ordinary Account	1,000.00
£1,953.10	Carried forward at 31.12.1995	£2,507.25

SPECIAL INTEREST GROUPS

FOREIGN HARDY FERN GROUP — A.R. Busby

I am pleased to report that this group continues to attract new members. Although copy for our second newsletter was slow to materialise, it was circulated in September and contained articles on foreign hardy ferns in the British midlands, including a short note and photocopy of the only reliably hardy *Davallia*, namely *D. mariesii*. I now have sufficient copy for our third newsletter which will be circulated in the New Year.

Any members wishing to join this group should write to the General Secretary, A.R. Busby, 16 Kirby Corner Road, Canley, Coventry CV4 8GD.

AQUATIC PTERIDOPHYTE GROUP — J.M. Ide

Anyone else interested in joining this group should contact Jennifer Ide, 42 Crown Woods Way, Eltham, London SE9 2NN.

TREE-FERN GROUP — M.H. Rickard

An introductory newsletter was issued to members during the spring. Initially I had expected the newsletter to be issued annually but interest in tree-ferns is so great that it now looks as though two a year will be necessary. The next issue, due this autumn, will contain several articles likely to be of considerable interest to growers, with notable contributions from Alastair Wardlaw. If anyone new would like to join the group please send ten second class stamps, or £2, to cover expenses for the next twelve months to me: Martin Rickard, Kyre Park, Kyre, Tenbury Wells, Worcs. WR15 8RP. (Costs to overseas members vary by region, please send enquiries to me.)

As yet no meeting of the group has been attempted because members are very far flung – Cornwall, Sussex coast, Tyneside and central Scotland and many stations in between – but it is in our minds to try and organise a get together at some stage. Until it is possible to arrange something an alternative may be to visit me here at Kyre Park where I can show members a range of thirty or so different species of tree-fern.

FILMY FERN GROUP — S.J. Munyard

Eight members from three countries have joined this group. The first newsletter will be published in spring 1997. Would anyone alse interested in joining please contact Steve Munyard at 234 Harold Road, Hastings, East Sussex TN35 5NG: tel. 01424 425316.

FERN WORLD-WIDE WEB – The BPS on the Internet!

Early in 1997, the BPS World-Wide Web (WWW) site on the internet will open. This will allow the 40 million people all over the world who are connected to the internet to have on-line access to information about the BPS and pteridophytes generally.

There will be information on the Society and the benefits of membership, an introduction to pteridophytes, information on BPS projects such as the Mapping Project, high-resolution digital images of ferns and links to other sources of fern information on the internet. It will be rather like a new BPS journal, but one that is free to anyone on the internet and which can be continually updated rather than waiting for fixed paper issues. The possibilities are extensive and very exciting – we are pleased that the BPS is keeping up with the latest communications technology.

The BPS site is based on the WWW server computer at The Natural History Museum to whom we are very grateful. At the time of this issue of the *Bulletin* going to press, everything is planned and underway and we hope to have the site in action by the end of January 1997. The URL, or address, is "http://www.nhm.ac.uk/bps/".

Anthony Pigott (Anthony.Pigott@btinternet.com)

OBITUARIES

Professor Dr TADEUS REICHSTEIN 1897 – 1996

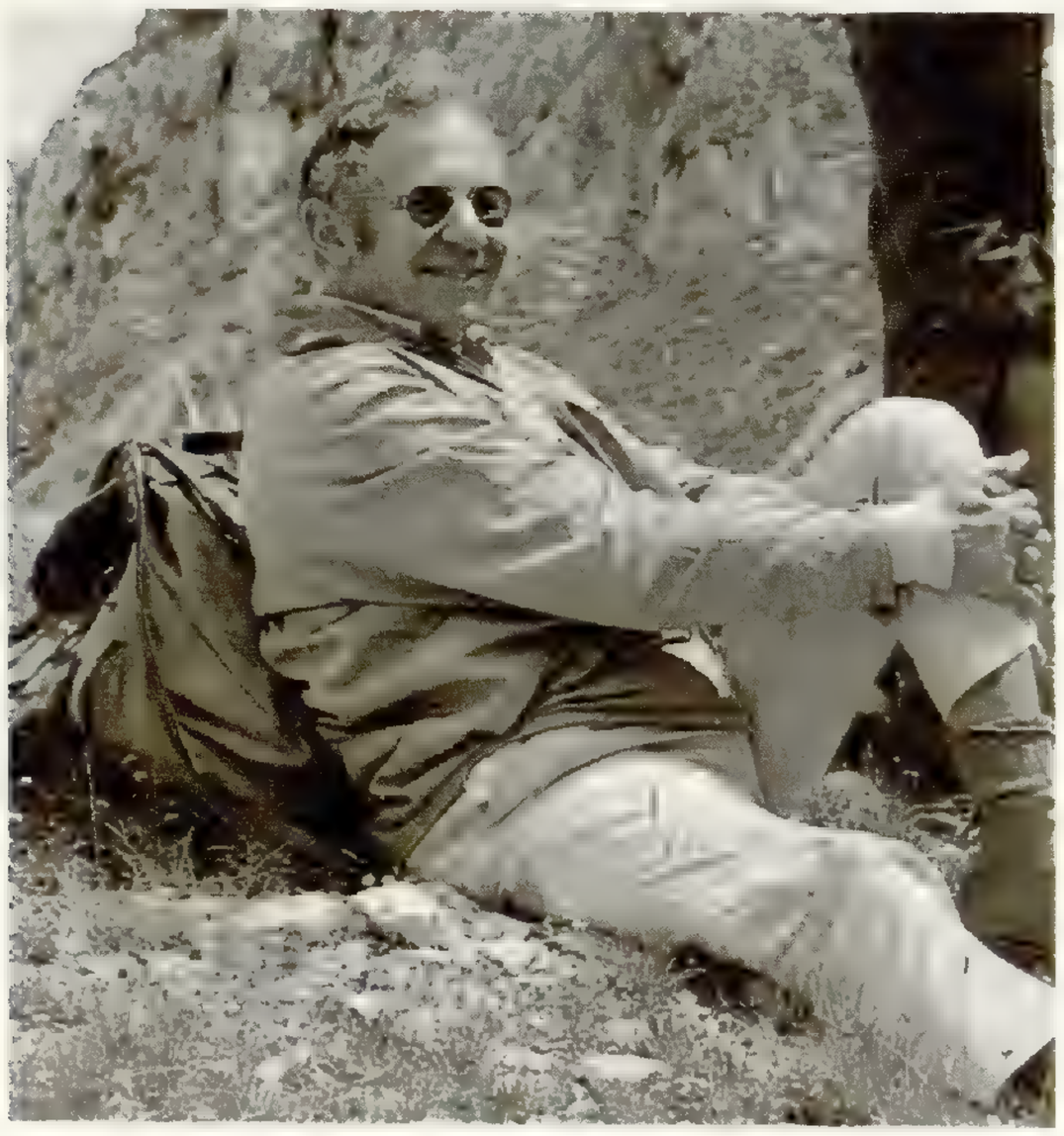

photo: K. Rasbach

Tadeus Reichstein in Italy, July 1973

On 1st August Professor Tadeus Reichstein, Honorary Member of the BPS, organic chemist, fern taxonomist, mountaineer, philanthropist and friend to so many, died when in his 100th year. In the last few months, although irritated with intermittent illness, he had been trying to complete some final accounts of *Asplenium* and *Cheilanthes* for *Flora Iranica* (ed. Rechinger). Reichstein joined the BPS in 1964 and was made an Honorary Member in 1967; he was a generous patron of the Society.

Reichstein was born in Wloclawek, Poland, on 20th July 1897, son of an engineer. He worked and lived with his family for a time in Kiev in the Ukraine. In 1905 they moved to Zürich where Swiss citizenship was granted to them in 1914. The following review of his early work in chemistry is taken from D.H.R. Barton's obituary, *Independent*, 16th August 1996. Reichstein's first degree was in chemical engineering from the prestigious Eidgenössiche Technische Hochshule (ETH). In 1933, as a young staff member of ETH, his first great contribution to organic chemistry was to synthesise vitamin C, developing a method which apparently is still used today throughout the world. He completed a PhD in organic chemistry in 1925 under Prof. Staudinger, and together they investigated the odoriferous constituents of coffee, work which became the basis of modern 'instant coffee' powders. In 1938 he moved to Basel University as Professor and Head of the Department of Pharmacy, later in 1946-67 as Professor of Organic Chemistry. Reichstein then turned his attention to the isolation of the hormones in the adrenal cortex, finding in all 27 hormones and obtaining them in crystalline form. Amongst these he named one corticosterone, now known as cortisone. Parallel work was being carried out in the United States by Prof. Edward Kendall, and the American clinician Dr Philip Hench postulated that cortisone might be effective for the treatment of arthritis. It was not surprising that all three were jointly awarded the Nobel Prize for Medicine and Physiology in 1950. Reichstein's chemical achievements continued to be acknowledged across the world, and here in the UK, the Royal Society of London awarding him its highest accolade, the Copley Medal, in 1968.

Tadeus (Tadzik) Reichstein's botanical career began to develop in the early 1950s when a Swiss colleague showed him a copy of Irene Manton's *Problems of Cytology and Evolution in the Pteridophyta* (CUP, 1950). He immediately wrote to Manton asking how he could confirm the putative hybrid nature of some of his local ferns. Her reaction was typical: she offered to go and show him at the laboratory bench! From this began an association with the Leeds 'School' of cytotaxonomists (John Lovis and Anne Sleep in particular), as a result of which, on retirement from his Chair of Chemistry in 1967 at the age of 70, Reichstein began to develop a penetrating appraisal of the larger fern genera of Europe (*Asplenium, Cheilanthes* and *Dryopteris*). He became fascinated in polyploid fern complexes.

Reichstein soon built up a substantial network of collaborators, in particular John Lovis and Anne Sleep in Leeds, Gabor Vida in Budapest, Jakob Schneller in Zürich and Mary Gibby in London. Latterly, Ronnie Viane of Gent was funded by and worked closely with Reichstein, bringing technical and academic skills and a patience which allowed Tadzik to continue to the last in the way that he did. In these later years too Reichstein had fostered a hitherto latent talent of Helga Rasbach (Glottertal) to prepare and count chromosomes and she joined the 'team' to check cytologically his fern hybrid offspring. This teamwork was all important to Tadzik for, as he grew older, he did not slow up, as would most; he would just get impatient if others could not produce results as quickly.

Reichstein's former research unit in plant chemistry at Basel University was still active and he continued that work in parallel, bringing his knowledge of phloroglucinol chemistry to bear on problems of species relationships in *Dryopteris* and developing a long-term working relationship with Carl-Johan Widén of Helsinki. Another long-term member of this team, sponsored financially for many years by Reichstein, was Christopher Fraser-Jenkins (Bridgend) who has an uncanny eye for the new and unusual, searching out those missing pieces of the evolutionary jigsaw during his extensive travels in geographically and politically remote places. In all his fern work Reichstein was a great collaborator, and practically all his fern papers have been multi-authored. An exception is a favourite subject of his, his 1981 paper on "Hybrids in European Aspleniaceae (Pteridophyta)" *(Bot. Helv.* 91: 89-139).

Tadeus Reichstein was a gentle, lovable man, one who welcomed all who sought his friendship and understanding. His counsel was wise and tempered with tolerance but he found the pedantic antics of those 'botanical lawyers' who wrote – and re-wrote – the *International Code of Botanical Nomenclature*, or those who unearthed long-forgotten but earlier Latin names, irksome and often infuriating. Irene Manton said of him when commemorating his 90th birthday *(Fern Gazette* 13: 131): "*A pioneer as effective as this in so many different fields of human activity is rare indeed and anyone privileged to have known him personally can scarcely fail to be both proud and grateful for the experience*." Indeed we are.

A.C. Jermy

RAY COUGHLIN 1918 – 1996

It is with great sadness that we have to announce the death of Ray Coughlin after a short illness. Ray was one of the finest fern growers of the century, and in my opinion the finest grower and propagator of ferns in the last two decades. We extend our sincere condolences to his wife, Rita. His death is also a great loss to many of us who have lost a very, very good friend. Ray was a marvellous man, generous, kind, patient and always interesting to talk to.

Ray was very proud of his roots in the south-west outskirts of Birmingham where he lived all his life. He was born in Rubery in 1918, apprenticed at Brasshouses and went to work at Austin making pressed tools. He later moved to Garingtons in Bromsgrove where he made gauges. He retired early in 1977 allowing him plenty of time for his garden for the next 18 years.

Ray joined the Society in 1969 when by chance he heard of a field meeting being held at Bromyard in Herefordshire. The atmosphere was apparently very convivial, with Jimmy Dyce as usual in good form as Secretary/host. Few ferns were seen but the weekend was made memorable by the discovery of a good bulbiferous plant of *Polystichum setiferum* 'Divisilobum'; this plant is still in cultivation in Ray's garden. Ray was hooked by the ferns and by Jimmy Dyce, and both he and Rita joined up!

I first met Ray in August 1970 at the Ribblesdale meeting in Yorkshire. My wife and I were immediately invited to see their garden, but as I then lived in the south-east it was many years before I made it. What a pity! It was, and still is, the finest fern garden you'll find anywhere. Although only perhaps 30 feet wide, the garden was several hundred yards long and covered about an acre. It was jammed full of treasures. Not only did Ray grow ferns but he was very active in the Alpine Garden Society so alpines were plentiful, but so was really anything of quality. Rhododendrons in variety abounded, as did choice bulbous plants, bamboos, clematis, magnolias and many other interesting shrubs. Latterly he became hooked by 'semps' *(Sempervivum)* he was without doubt a real plantsman.

Ray raised many 'new' cultivars, some of which were described in the *Pteridologist* 1986, but sadly few of these are in general cultivation. Most were single-crowned clones, which are no doubt still in the garden: hopefully their locations are known to Rita. Ray was incredibly generous with his plants, I can't imagine anyone who knew him not being given bits and pieces. Certainly I can't go far in my garden without seeing a label 'ex R & R' (Ray and Rita)! He has even raised a hybrid probably new to science. This plant has been tested by isozyme analysis in America and may be a hybrid between *Polypodium glycyrrhiza* 'Longicaudatum' and *P. vulgare* 'Bifido-grandiceps'. As these species do not meet in the wild it is therefore almost certainly new. I would like to see it named *P.* x *coughlinii*, but it needs someone to do the necessary back-up research and write a Latin diagnosis.

For several years he raised ferns commercially for Fibrex nurseries, then at Evesham. His plants were all of a beautiful quality at a time when hardy ferns were not available from Holland. This mass propagation often produced interesting variants which Ray put to one side and if good enough they ultimately got into his collection.

Photo: courtesy Rita Coughlin

Ray Coughlin at Lydiate Ash in 1991 during the BPS centenary garden tour.

Happily, his fern collection is safe as Rita is continuing to look after the garden at Lydiate Ash in north Worcestershire; long may the collection continue to thrive.

The garden is listed in the BPS leaflet *Where to See Ferns*. Rita is still pleased to welcome members as long as they phone first (tel. 0121 453 3416).

Martin Rickard

MARGARET BUSBY

We were all extremely sad to hear of the death, after a long illness, of Margaret Busby, the wife of Matt Busby our Secretary, in May 1995.

Although never actually a member of the Society, Margaret frequently attended meetings, often performing essential functions such as preparing the refreshments, as well as giving back-up to Matt. Margaret is greatly missed by all of us who knew her, and also by those who appreciated how much she supported the Society directly and indirectly during the first 16 years of Matt's secretaryship.

Martin Rickard

FRANK BRIGHTMAN 1921 – 1996

Frank Hatton Brightman, a member of our Society since 1960, died on 20th June 1996.

Frank went to University College London and read Botany, but his time there was curtailed when he was called up in the war. After some time in Radar Communications he was invalided out and became a schoolmaster. When his two children had left home he took a job at The Natural History Museum, London, where he was head of the Education Department until his retirement in 1981.

Frank was a popular member of many societies. He was a founder member of the Kent Trust for Nature Conservation at a time when nature conservation was a new idea. He was an active member and one time President of the Kent Field Club and edited their journal for many years. He was also a founder member and later President of the British Lichen Society. The Linnean Society of London honoured him with the title Fellow Honoris Causa for services to botany. He had a long association with the South London Botanical Institute, becoming President and then Director. With the help of his second wife, he resuscitated the SLBI garden to a standard that caused it to be invited to join the National Gardens Scheme.

He collaborated in the writing of several books, the most successful being *The Oxford Book of Flowerless Plants* with the artist Barbara Nicholson.

J.A. Crabbe

JAMES RUSSELL 1920 – 1996

It is with deep regret that I report the death of James Russell, late of Castle Howard, North Yorkshire, a BPS member since 1967.

Jim and his sister were always ready and willing to welcome any fern grower or collector into their home for a chat and refreshments, but I always found that being out with him on some type of fieldwork was a particularly memorable experience. His collection of ferns and trees was something to be admired.

Born in 1920, his main ambition was to be a botanist, but after being invalided out of the forces in 1943 he turned to the more practical side of things and spent his earlier career reorganising Sunningdale Nursery. In 1968 this nursery closed and he went to Castle Howard, taking with him many plants that are still growing in the grounds of that Yorkshire castle. His one ambition was to go plant hunting in China, but it was 1985 before he was able to fulfil this longing. In 1994 he was awarded an Honorary Doctorate by the University of York for his lifelong contributions to botany and to conservation.

Memories of James Russell will live on, not only in the lovely gardens he was involved with in Yorkshire, but also those he helped to design and create worldwide. Any who were fortunate enough to know him will also remember him for his willingness to impart his vast knowledge to others.

Jack Bouckley

STIRTEVANT PIGGIN

We regret to announce the death of Stirtevant Piggin, who joined the Society in 1970 and participated in several field meetings in the seventies during the 'Jimmy Dyce period'. I well remember him, with his friend Mrs Petch, a member also from Nottingham, attending a very successful meeting at How Hill in Norfolk in 1970. Sadly I had seen little of him for years.

Martin Rickard

ANDRÉ LABATUT

Over the years French members of the Society have been uncommon, but recently there has been a great surge of interest in ferns on the other side of the channel. It is thus particularly sad to have to report the premature death of André Labatut, one of the pioneers of this interest.

André, a school teacher in Bergerac, first joined the Society in 1980. With his English wife, Pamela, he visited me at Leinthall Starkes in the early 1980s and a strong bond of friendship was struck. Over the years he authored or co-authored many papers on the ferns of France. In 1990 my family descended on Pam and André for a very enjoyable short visit after a 24 hour sleepless journey *en route* to the Pyrenées. Here I met Michel and Agnes Boudrie for the first time and saw André's herbarium specimen of *Asplenium trichomanes* subsp. *pachyrachis*, which made me realise that we had this fern in Britain too. I also saw for myself the difficulties of cultivating ferns in south-west France. In the beautiful wooded garden orchids grew well but it was too dry for most ferns. Nevertheless, André's love of ferns never dimmed.

Inevitably André's enquiring mind was not restricted to the world of ferns. He published in America on the ancestry of Paul Revere and was even mentioned in *The Times* in an article about pronunciation!

My memories of the pleasure of André's enthusiasm in the field in France will be shared by several British members who participated in fern meetings on the Continent. He will be missed. We extend our sympathies to his widow, Pam.

Martin Rickard

MEMBERSHIP LIST: ADDITIONS AND AMENDMENTS

NEW MEMBERS

** new members for 1996; ** new members for 1997; # members rejoined in 1996*

* Aguraiuja, Miss R., Kloostrimetsa Tee 52, Tallinn, EE-0019, Estonia
\# Atkinson, Mrs M.G.C., Clarence House, Higher Downgate, Callington, Cornwall PL17 8HL
\# Baier, Mr & Mrs G.R.S., 24 St. Michael's Road, Farnborough, Hants. GU14 8NE
** Barnes, Dr B., 26 Hastings Road, Hillside, Southport, Merseyside PR8 2LW
* Bassett, Mr T.R.M., The Haven, Parkfield Farm, Leyes Lane, Kenilworth, Warwicks. CV8 2DE
* Baxter, Mr W.D., 307 Riverdale Cir., Stephenson, Virginia 22656, U.S.A.
* Botanical Research Inst. of Texas, 509 Pecan Street, Ft Worth, Texas 76102-4060, U.S.A.
* Bragg, Mr W.L., The Red House, Sturminster Marshall, Wimborne, Dorset BH21 4BA
* Carter, Ms A.B., 86B Balmoral Avenue, Belfast BT9 6NY, Northern Ireland
* Cogswell, Mrs E., 6 Kenmoor Close, Preston, Weymouth, Dorset DT3 6JZ
* Coleman, Dr J.N., Henderson Hall, Redhall Drive, Newcastle Upon Tyne, Tyne & Wear NE7 7UY
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* Brown, Mr D.M., Ellesmere, Drigg, Holmrook, Cumbria CA19 1XG
\# Ellis, Mr C.P., 39 West Square, London SE11 4SP
* Francis, Mrs P.M.A., c/o Natural History Section, Bolton Museum & Art Gallery, Le Mans Crescent, Bolton, Lancs. BL1 1SE
* Fraser, Mr R., 175 Arbutus Road, Salt Spring Island, British Columbia V8K 1A3, Canada
* Furney, Mrs G.M., Ardavilling, Midleton, Co. Cork, Eire
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* Wilkinson, Mr E., Meadow Cottage, Great North Road, Wideopen, Tyne & Wear NE13 6LW
* Williams, Mr & Mrs B. & C.B., Sira, Whilton, Daventry, Northants. NN11 5NN
* Wood, Mr & Mrs J.H.T., Kelvin View, Ashton Lane, Ashton, Chester, Cheshire CH3 8AA
** Zenner, G., Freiherr-vom-Stein-Str. 33, Kirn/Nahe D-55606, Germany

CHANGES OF ADDRESS / AMENDMENTS

Ackers, Mr R.G., & Miss L.A.M. Williams, Deersbrook, Horsham Road, Walliswood, Surrey RH5 5RL
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Jeffries, Mr J., Sylvanus, Long Lane, Wiveton, Holt, Norfolk NR25 7DD
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Peroni, Dott. G., Via Roma 23, Viggiu, 21059, Italy
Pryor, Miss K.V., 6 Tewdrig Close, Llantwit Major CF61 1SZ
Raine, Dr C.A. = *Jenkinson,* Dr C.A., 62 Bailey Street, Prestwich, Manchester M25 1HQ
Roskam, Mr H.C., Valkstraat 19, Utrecht 3514 TG, Netherlands
Schneider, Dr H., Rijksherbarium, University of Leiden, van Steenisgebouw, Einsteinweg 2, Leiden 2300 RA, Netherlands
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Thomas, Prof. B.A., Department of Geography, University of Wales Lampeter, Lampeter, Ceredigion SA38 7ED
Thomas, Mr M.O.W., Ynys Einion, Eglwys Fach, Machynlleth SY20 8SX
Walker, Mrs D., 6 Mbuya Nehando Drive, Rusape, Zimbabwe
Wilson, K.A., P.O.Box 39512, Los Angeles, California 90039-0512, U.S.A.
Zink, Dr M.J., The Herbarium, Royal Botanic Gardens, Kew, Richmond, Surrey TW9 3AE

MEETINGS PROGRAMME 1997

Meetings Secretary: *Post vacant*
Meetings Sub-Committee: R.G. Ackers, P.J. Acock, N.J. Hards, A.M. Leonard, P.H. Ripley

Sat 1 March – **Spring Indoor Meeting – Cambridge**
Time: 11.00

Sat 5 April – **Day Indoor Meeting – Coventry**
Location: Warwick University, Dept. of Science Education, Canley, Coventry
Leader: Matt Busby & Graham Ackers Time: 10.30

Fri 9 - Sun 11 May – **Malvern Spring Show: BPS Stand**
Location: The Three Counties Showground, Malvern
Further Info.: Matt Busby

June – **Weekend Field Meeting – Norfolk**

Sat 26 July – **Day Indoor Meeting & Midlands Fern Show – Coventry**
Location: Warwick University, Dept. of Science Education, Canley, Coventry
Leader: Matt Busby Time: 11.00

August – **Week Field Meeting – Derbyshire**

Sat 30 Aug - Wed 3 Sept – **Group of European Pteridologists Long Weekend Meeting – North Wales**
Location: Bangor Further Info.: Clive Jermy

Thurs 21 - Sat 23 August – **Southport Flower Show: BPS Stand**
Further Info.: Matt Busby

September – **Week Field Meeting – Scotland**

Sat 18 October – **Autumn Indoor Meeting & Annual General Meeting – Kew**
Location: Royal Botanic Gardens, Kew, Surrey
Leader: Peter Edwards Time: 11.00

January 1998 – **Winter Indoor Meeting**

For further details of these and other meetings of interest to members, including information on accommodation, please see the separate Meetings Programme sheet. This can be sent to overseas members on request.

REGIONAL MEETINGS

For details of additional meetings in the following areas, please contact the regional organisers, enclosing a stamped addressed envelope.

Wessex	J.E. Jarvis, Vermont, Jubilee Road. Nailsworth, Stroud, Gloucs. GL6 0NG
Midlands	A.R. Busby, 16 Kirby Comer Road, Canley, Coventry CV4 8GD
Leeds & District	B. Wright, 130 Prince Rupert Drive, Tockwith, York YO5 8PU
South-East England	P.H. Ripley, North Lodge, Dene Park Gardens, Shipbourne Road, Tonbridge, Kent TN11 9NS
East Anglia	Mrs M.E. Nimmo-Smith, 201 Chesterton Road, Cambridge CB4 1AH
North-West England	Mrs M. Garstang, Overbeck, Pennybridge, Ulverston, Cumbria LA12 7RQ
Cornwall	Miss R.J. Murphy, Shang-ri-la, Reskadinnick, Camborne, Cornwall TR14 0BH

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